Summa Against the Keynesians

A Treatise on Economics

Dmitry Chernikov

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The whole world groaned and marveled to find itself Keynesian.

– Imitating St. Jerome

Preface to the 4th edition

This book's title and structure imitate St. Thomas Aquinas' *Summa Contra Gentiles*, and when one is young, one thinks little of the arrogance required to conceive of a book that would dare rival that of the great doctor.

It is a humbling realization that when in 2021 I set out to repair this book, just rereading it was a painful and brutal experience. When I wrote the first "edition" of this book, I was barely out of my 20s and dealing with some serious issues. I was horrified by what I had written, indeed I had nightmares about it.

The flaws were galling: I put everything but the kitchen sink in it; there were errors in economic reasoning; some stuff was weird; some downright embarrassing. There were a lot of extraneous commas. One thing I particularly regret is the unseemly treatment of David Friedman, a great economist and libertarian.

The revision of this book is part of a four-year project during which I wrote four other books: *Choice, Shmoice* on the philosophy of abortion, *Distribute This* on John Rawls, *G.A. Cohen: The Anti-Moses* on an important socialist egalitarian, and *Secrets of Metaethics* which incidentally incorporates some of the deleted material.

This book is in the Austrian tradition; for example, I learned my interest theory from Rothbard, and my business cycle theory from Mises, but certainly I take recourse to any school or approach that seems to yield truths.

A note on language in our tragicomic age. When I say something like "an entrepreneur faces uncertainty because he has to deal with the actions of his competitors," "he" also includes women and all the other 72 genders. It is granted that an entrepreneur can be female. I do not slight the deviants by not writing "he or she or xe." I will not use "they" because, unlike the demon-possessed man who is legion, "entrepreneur" is singular. This is merely traditional English grammar which is concise, beautiful, and utterly non-"oppressive." And there are also good reasons to use "he" rather than "she," such as that it recognizes men's honor and their status as first among equals and demonstrates that the author does not fear the feminists.

Introduction

That Keynes' fantastic "ideals" shaped his economics

There are only two kinds of politicians in Washington today: liberal Keynesians who favor borrowing and spending and conservative Keynesians who prefer to lower taxes while still running deficits to "stimulate the economy." Neither group, moreover, finds any fault with credit expansion as monetary policy. Such is the intellectual legacy of John Maynard Keynes, a revolutionary whose economic ideas have dominated both theory and policy for almost 100 years. "When I was asked some years ago whether Keynes was dead, I had to reply: 'Yes, Keynes is dead. And so are Newton and Darwin.'" So said Paul Samuelson (1983), one of the most prominent early Keynesians. Keynesian economics is indeed very much alive. The aim of the book is to show that shouldn't be.

Keynes' magnum opus is entitled *The General Theory of Employment, Interest and Money*. The name is ironic. (1) Keynes didn't get employment right, thinking it depended on aggregate demand and specifically "investment" when in fact it depends on the marginal productivity of labor and the workers' preferences for leisure, i.e., on the demand for and supply of labor. (2) He didn't get interest right, imagining it to be a purely monetary phenomenon when in fact it is a real phenomenon arising from exchanges between people with different time preferences, with monetary influences temporarily perturbing the interest rate up or down but not determining its fundamental value. (3) He didn't get money right, believing that "liquidity preference" or hoarding could cause depressions, when in fact demand for money is too humble an economic variable to produce any such mischief, and that uncertainty of the future (that makes money useful as a store of value) made the free enterprise system unstable, when in fact it is the source of economic progress. All these matters will be discussed in the book in due course. Since then Keynesianism has had its ups and downs. The Post Keynesian Victoria Chick (1983) argues that "policy must be designed for specific circumstances… Disillusionment with 'Keynesianism' in recent years has been caused by the fact that 'Keynesian' policies were being applied to a world for which they were

never intended." (316-7) Scandalous! Economic laws are the same for all people and at all times. The policies informed by those laws will also tend to be very similar, assuming some concern with human happiness. Chick proceeds to deny this point: "economic theory is not a body of abstract logical analysis based on general principles applicable to all times and types of economic systems" (360). (4) Some "general theory" Keynes must have proposed according to *her* doctrine.

Keynes was an aesthete and hedonist, or in less flattering terms pervert, a privileged, aristocratic, cold-blooded, ambitious, self-absorbed, willful, impatient, immensely charismatic man with zero moral scruples. Everyone for him was just a means to his ends. He had ideals, but he was no Keirseyan Idealist. His personal magnetism and self-conscious contempt for all restraints explain his bizarre economics (since economics studies laws of human action), his revolutionary zeal, his boundless self-confidence, his lust for influence and ability to convert people to his heresy, his power to seduce other economists into adoring him, and his ferocious hostility toward the bourgeoisie with their "conventional morality." He despised the very people he was supposed to instruct. "A lot of the theory was made up 'on the hoof', to fit the practical requirements of the moment. … [Keynes] could not touch any topic without weaving a theory about it, however fanciful. … His mind was mercurial, which meant that he quickly changed his opinion." Deep thinker Keynes was not. "Keynes was the most intuitive of economists…" (Skidelsky 2010: 56-7).

Keynes was a man of action, and his was policy, or a hodgepodge of random conflicting policies, seeking a philosophy. ("Keynes developed his political theories long before his economics, and the principles of his economics reflected his politics rather than the other way around," says Fitzgibbons (1988: 54-5).) What he found was an illusion. The policies Keynes advocated were indeed popular among government functionaries, and often even among the public. But they were popular only in the sense in which sin is popular. They were destructive in the longer run, but Keynes dismissed the problem on the crazy grounds that "in the long run we are all dead." But of course the reader is alive, and he has to deal with the present consequences of past Keynesians misdeeds; in Henry Hazlitt's (1996) words, "today is already the tomorrow which the bad economist yesterday urged us to ignore" (4). Economists before Keynes were guardians of the long run, not in the sense that they preferred it to the short run but in the sense that they took into account the long-run consequences of policy on human welfare. Keynes' revolution consisted in legitimizing the exclusively short-run focus. With Keynes, the answer to the question "How did we get so poor?" is "Gradually, then suddenly."

From the philosopher G.E. Moore, Keynes took his "moral" ideals

of truth, love, and beauty, insofar as Moore considered the highest good to consist in the pleasures of friendship and contemplation of beautiful objects. (Moore's *Principia Ethica* has the distinction of being, in my view, stylistically the best philosophy book ever written as a single uninterrupted perfectly smoothly flowing developing line of thought going for over 200 pages (I do not mean to say that Moore's arguments are *correct*).) "Nothing mattered" to Keynes "except states of mind," specifically his own states of mind in the *present* which later grounded his denigration of the economists' worries about the long run. From Edmund Burke he took his anti-rationalism and principle of expediency in economics and politics which were only means to the pursuit of the ideals. There were no such things as human rights, for example, or moral law. The state, specifically, was to be unlimited. "It was known before Burke's time that government ought to aim at the happiness of the community; but there were innumerable minor aims and so-called rights that eternally stood in the way" (quoted in Fitzgibbons 1988: 58). One might object that the happiness of the community is promoted precisely by *limitations* on government power, and that human rights are how the community *defends* itself from government. Moorean "religion" "made morals unnecessary," Keynes wrote. "Why should I not let the universe go to the devil and save my own soul?" (41) The result was that the purpose of the economy for Keynes was to satisfy not just any consumer preferences but only "ideal" ones. He was no utilitarian; the economy was a means towards "a state of consciousness" (64), "the moral transformation of humanity" (188), "sublimation of materialistic egoism" by "the pursuit of an ideal life for the whole community of men" (*CW*: IX: 254). The allegedly crude interests of the people and the bourgeoisie were to him of little concern. Keynes felt that bourgeois values, including work, thrift, charging interest, precaution, care for the future, private property, faith, sexual restraint, were, in Hillary Clinton's parlance, deplorable. These things may have been useful for a time because they led to high economic growth. But times had changed, and these morals had become vicious. Keynes wanted to remake the world in his own image. His idealism is summed up in the following passage:

> For purposiveness means that we are more concerned with the remote future results of our actions than with their own quality or their immediate effects on our own environment. … I see us free, therefore, to return to some of the most sure and certain principles of religion and traditional virtue – that avarice is a vice, that the exaction of usury is a misdemeanor, and the love of money is detestable, that those walk most truly in the paths of virtue and sane wisdom who take least thought for the morrow. We shall once more value ends above means and prefer the good to the useful. We shall honor those who can teach us

> how to pluck the hour and the day virtuously and well, the delightful people who are capable of taking direct enjoyment in things, the lilies of the field who toil not, neither do they spin. (*CW*: IX: 329-30)

It is paradoxical that he prescribed purposelessness to the individual yet central planning to the state. But then he thought of himself as a philosopher-king uniquely fit to plan. (No would-be philosopher-king wants to be ruled by a king of whose philosophy he does not approve.) His idealism colored his economics, indeed he rejected the view that economics was value-free. There is nothing wrong of course with thinking that there is more to economic progress than ever improving bread and circuses. Subjectivism in economics does not entail subjectivism in ethics, in ethics we need not take ends as given and immune to all criticism. But it must be recognized that desire for improvement, the "the original and ineradicable craving for a fuller and happier existence" (Mises 1996: 882) is at the heart of human nature, and progress is good even for its own sake. Yet Keynes envisioned a utopia which would bring an eventual end to economic development. In addition, even if we accept his contempt for "love of money," it does not follow that the state ought to coercively prevent people from acting on the profit motive. Maybe that is unjust or does more harm than good. Like Marx's idealism, Keynes' idealism and fervor were ultimately wasted on indefensible causes.

Salerno (1992) maintains that up until *General Theory*, Keynes believed that despite its moral unattractiveness capitalism was still capable of bringing the world to his utopia. Having solved the "economic problem," capitalism would wither away. But the Great Depression changed his views. Capitalism, however crippled, was the wrong means to the end. Various statist "experiments," including both Soviet and Nazi kind, were now called for to replace it. *General Theory* detailed one such fantastic experiment. Keynes long ago condemned "avarice, usury, and precaution" as immoral; when these became in *General Theory* "liquidity preference, interest payments to the *rentier*, and saving," he tried to argue that they were uneconomic, too. (29) "With respect to capitalism, then, the Keynes of the *General Theory* is not a savior in any sense but a vengeful angel come at last to destroy what is immoral and unaesthetic because it has finally proven useless." (38) Like Marx, Keynes was howling gigantic curses at capitalism but in his own unique ways. Keynes' ethics and "religion" (by which we can suppose Keynes meant his highest values) were the cornerstones of his economics; it is strange that later Keynesians enthusiastically adopted the latter while completely ignoring the former. But if the ethics and religion are suspect, and they are, to that extent the economics stands undefended.

Meltzer (1988) argues that "although… Keynes advocated investment planning, he never advocated state ownership, and he opposed socialism" (253). But this is a distinction without a difference. "Investment planning" is not some middle ground between capitalism and socialism. It is not even interventionism. Socialism just *is* "investment planning" by the state. But if one wants to call Keynes a fascist who extolled "semi-autonomous corporations" (nominally private ownership, state control) rather than socialist, I have no objection. Fascism, after all, is sort of culturally conservative nationalistic socialism for the middle class. Skidelsky (2010) makes it clear: that "capitalism was evolving new forms of public-private partnership which blurred the traditional separation of state and market and weakened the emphasis on maximizing profit" met with Keynes' approval (133). He objected only to socialism in which he himself or his fellow elitists were not in command of the state.

The essence of laissez-faire capitalism is that there is no conflict between individual liberty and the common good, between individual pursuit of happiness and general welfare or the greatest good for the greatest number. Keynes denied this thesis vigorously, thinking that a free economy severely underperformed and in addition was subject to devastating business cycles. Capitalism "doesn't deliver the goods," he wrote, and in addition "it is not intelligent, it is not beautiful, it is not just, it is not virtuous" (*CW*: XXI: 239). Thus, his economic and moral (or aesthetic) misgivings pointed in the same direction.

Many people say that Keynes was a genius. But genius is as genius does. Piling up mistake upon mistake, however great one's wit, charm, eloquence, force of personality are, signifies incompetence, not high IQ. Keynes' personal libertinism and overweening ego manifested themselves in the desire to overthrow the established core of economics. He failed at doing so, but, like the fallen Lucifer, dragged many economists to hell with him. "A man who thought and acted in terms of power and brutal domination, who reviled the concept of moral principle, who was an eternal and sworn enemy of the bourgeoisie, of creditors, and of the thrifty middle class, who was a systematic liar, twisting truth to fit his own plan, who was a Fascist and an anti-Semite, Keynes was nevertheless able to cajole opponents and competitors." (Rothbard in Skousen 1992: 194-5) If he was a genius, then only an evil one.

Keynes' great mission in life consisted in devising rationales to free the state from all bourgeois moral restraints. He was, by his own account, an immoralist. He was an amoralist too who "entirely repudiated a personal liability… to obey general rules." Rod Dreher (2022), writing for *American Conservative*, notes: "… the world [Aleister] Crowley (d. 1947) envisioned in his writings… was a world in which

individuals were 'liberated' from sexual taboo, and believed that they discovered their true selves through assertion of the will via sex acts, especially ones that Christian culture perceives as disordered or otherwise perverted." That works for both crime and personal vice. Why would anyone be a thief, a bank robber? There is to be sure a financial incentive if one is good at the "job." But there is also the desire to flaunt his freedom from moral strictures and his contempt for the authorities. The outlaw life is about apparent liberation from both the law and the law's Author. It's affirmation of amoralism, "whatever feels good, do it," and indeed immoralism, "shock the bourgeoisie." And shocking the bourgeoisie was Keynes' specialty. Violent delights have violent ends, and it is the world economy that has suffered for decades from the corruption unleashed by Keynes' economic theories.

If you decide to reject the moral wisdom of the past generations, you should at least have the intellectual power to work out the correct morality, including with the help of economics, yourself from scratch, from the ground up. Keynes could not manage this feat, and that was his downfall. He produced a lot of satire which might have been funny if only it were true.

Flighty, light-minded, and irresponsible, Keynes was all over the place, changing his positions seemingly randomly, as Meltzer documents. His endless list of policy prescriptions was extremely varied and mutually contradictory. At one time or another Keynes advocated every conceivable government intervention into the economy. From protectionism to capital controls to price controls to inflation to "redistribution of income" to government monopolies, there was no aspect of economic life that Keynes agreed to leave alone to private discretion. He seemed to arrive at his economics not from immutable logical deductions but by observing the events happening around him and reacting to them. For example, he observed significant unemployment in Britain and the U.S. in the 1930s and decided that this situation was the "norm" and there was such a thing as "equilibrium with unemployment" as a feature of the unhampered free market. Keynes made and then lost a lot of money on the stock market and soon enough started blaming capitalist economy, "speculators," and "uncertainty" for his own failures. (He also speculated for capital gains and forgot about the role of interest in determining income.) He was a central planner in Britain and figured that he liked the job, therefore socialism was perfectly hunky-dory, as long as he personally would remain in charge.

As Dillard (1948) points out, "the concept of pre-established harmony of economic forces… is absent from Keynes' thinking," therefore "social controls are needed to prevent [the economy] from plunging to its own destruction" (325). Keynes let his prejudice against

laissez faire gain the upper hand when he was constructing his theory. One of his arguments is that what is rational for an individual or firm like desire for liquidity or cutting wages is irrational (or impossible) for economy as a whole. But there are no Keynesian, or Marxian for that matter, contradictions within a free economy. It might appear, as many interpreters have suggested, that Keynes sought to destroy capitalism (with interventionism) in order to save it (from socialism). It's probably truer to argue that Keynes was a socialist in the long run while advocating various and sundry government interventions for "economic problems" in the short run. Mises of course objected that interventionism, far from being some stable and beneficial Third Way between capitalism and socialism, theoretically does not hang together and practically is merely an alternative method of transitioning to socialism. Interventionism leads to socialism not by revolutionary violence of the masses but by deception by the elites as the government blames the inevitable failure of every intervention on the remnants of the free market. It's not the case that the government saved us from socialism by means of interventionism. On the contrary, it crippled the market economy with interventionism and gave socialists more ammunition to claim that due to the resulting chaos capitalism has "failed" when in fact it was interventionism that failed.[1] The way to save capitalism is to stop sabotaging it every step of the way.

Keynes then took the cyclical unemployment in the Great Depression exacerbated enormously by government intervention and declared that it was in fact "involuntary" unemployment, an essential feature of the market economy. (Business cycle theory was not one of Keynes' concerns, some "short notes" on it being tacked on in Chapter 22 of *General Theory* as an afterthought.) A significant part of the Keynesian revolution was based on this misconception. Unemployment is "inevitably associated with present-day capitalistic individualism" (*GT*: 381). Keynesian economics collapses as soon as the premise of permanent mass involuntary unemployment under free-market capitalism is denied. For Keynes, "involuntary unemployment" does not just mean unemployment where many people are starving to death after somehow being excluded from social cooperation. It also means underemployment due to lack of what he called "full investment" and less production and output than is optimal. It may well be under his involuntary unemployment that everyone is working, it's just that they are somehow not working at peak efficiency. His story of how this is supposed to work is extravagant; the point for now is that his theory does not explain actual unemployment. Keynesians later deduced that Keynes must have meant that wages and prices are rigid. Of course, when prices are rigid, the system is not a market economy, and it doesn't work. Keynes then recommends monetary manipulation to "fix"

the problem.

Keynes neither understood nor ever expressed an interest in how the market worked, the coordinating nature of prices, or how economic progress occurred. He was perpetually mired in aggregates, oblivious to the relations of the variables *within* them. His immoralism in his personal life may have spilled into rejection of economic laws. Disconnecting macroeconomics from microfoundations allowed him completely free rein (or rather arbitrary power) in manipulating his grand variables. He felt that monetary and fiscal policies, i.e., inflation and deficit spending, could replace the mutual relative adjustment of individual wages and prices in ensuring full utilization of resources. The fact, however, is that they cannot, and they have deadly consequences in the longer run. Keynes did not integrate value theory and monetary theory, he merely brought attention to the idea that certain monetary tricks can have real results, something that few "classical" economists ever denied.

That labor unions should be empowered to inflict violence on their employers and customers in order to "raise wages" was an extremely popular doctrine of Keynes' time. The union members could, through coercion, *redistribute* some income to themselves from their less lucky brethren (who had to contend with bad jobs and below-market wages), but by crippling the market economy they surely lowered their overall standard of living. When the inevitable consequence of keeping wages above market-clearing values in *every* industry, mass unemployment, manifested itself, Keynes popped out and recommended inflation to shock the system into better coordination, to "drown all economic maladjustments in a flood of money," as Wilhelm Röpke put it (Hazlitt 1995: 273). This remedy was crude, did not work in the slightly longer run, and had toxic side effects. But it was "new economics." Don't trust any economist over 30, Paul Samuelson essentially declared in his ode to Keynes.[2] Keynes' prescription, Hahn (1949) writes, "transformed the evil of a rigid wage system into the virtue of an inflationary employment theory" (240).

Keynes starts with an assumption of an equilibrium with unemployment and then argues that lower overall wages will just result in lower aggregate demand and lower prices without alleviating the unemployment. That's obviously true. If unemployment is an equilibrium phenomenon, and the free market tends toward equilibrium, then full employment can only be a temporary disequilibrium situation. Unemployment is "normal." The classical argument that lower wages will equilibrate the economy and thereby bring about full employment therefore, in Keynes' theory, is null and void. Only government intervention might be able to force some sort of disequilibrium full employment for a short while. It is Keynes' assumption, however, that

offends. Another interpretation is that unemployment is after all a disequilibrium phenomenon, but the free and unhampered by interventions market has no means of returning to equilibrium. But in this case Keynes supplies no reason why this must be so.

The business cycle, and hence unemployment, is not a problem inherent in capitalism. It's not due to "selfishness" or "greed" or as Keynes would have it "fear." Rather it's due to *anti*-capitalist flaws in our system of money and banking. It is not, for example, individual bankers who are selfish and greedy, at least no more on average than anyone else, rather it is the long-established business model of fractional-reserve banking that's vicious and antisocial. If 100%-reserve banking had been implemented before the Great Depression, as Fisher (1936) and later Rothbard (2008) recommended, there would have been no such thing as Keynesian economics, indeed *General Theory* would not have been written. The interventionist manuals that are modern macro textbooks would not now exist; there would not be the IS-LM model with its monetary and fiscal policies. This is because there is no need for any "policies" at all under sound money and honest banking. The Federal Reserve and its lawless member banks, a kind of financial anarcho-tyranny, are why we can't have nice things in this country. Laissez-faire capitalism, when all property rights under it are well enforced, works fine on its own.

The strangest aspect of Keynes' teaching is his dismissal and even failure to acknowledge the time preference theory of interest. It may be that he did not grasp the primordial fact that consumption and investment (or present consumption and future consumption) are alternative uses of scarce resources and cannot both be had at the same time. He did not think that people abstained from present consumption and saved in order to invest, rather (at least under unemployment) investment by government automatically through his "multiplier" generated the equal savings. In Ventelou's (2015) interpretation, we are "freed, almost completely, from the constraints of scarce resources. … Human decisions are substituted for natural laws, sweeping aside the paralysis and fatalism that such laws inspire." (141) It was an incorrigible, rebellious mind that could have concocted a doctrine like that. Keynes' neglect of time preference may be explained by his assumption of the modern monetary and banking system. It doesn't matter how much people save and invest out of their incomes: the Fed and the fractional-reserve banks, by creating (or destroying) money and credit out of thin air, can set the interest rate to any value whatsoever. Therefore, the people's preferences about allocating their money between present and future consumption are irrelevant: the government simply overrides them with its own valuations. The state steers the economy as regards intertemporal allocation of resources in ways that

have nothing to do with what the public wants. Everything in *General Theory* thus depends on the dual assumption of rigid prices and unbound interest rates. However, the will of the people will not in the end be defied. Riding roughshod over time preferences in this manner is the primary cause of business cycles and economic instability. Further, to the extent that people hold cash in their hands rather than depositing the money in the banks, the power of the banks to print money and expand credit is curtailed. This "liquidity preference" puts a damper on government omnipotence, and so Keynes considers that to influence the interest rates. Why did Keynes disregard time preference? He thought that given unemployment in a depression, resources for investment did not have to come out of present consumption, and we could have a sort of free lunch; he may also have thought that the same reasoning applied in his long-run underemployment equilibrium. His theory of the multiplier causes government investment, under mass unemployment, to *increase* consumption, as well as to generate the savings necessary to pay for itself. Whenever employment picked up, such as due to a monetary injection, income to factors increased, and out of higher income more could be saved, hence saving depended not on the interest rate but on income. A higher interest rate, far from calling out more savings (as it does on the supply of loanable funds curve), instead reduces investment, hence employment, hence income, hence saving. It was demand for money that depended on the interest rate instead. Time preferences are supposedly ineffective in a depression because there is no opportunity cost of using unemployed resources. Capital goods are no longer scarce. We will see later why unemployment does not affect the interest rate. In addition, both real and human capital are misallocated in a boom and devalued in a slump and need to be redeployed properly, that is, to uses that serve the consumers best. They are indeed scarce insofar as they have alternative uses. It is true that greater efficiency of resource utilization can boost both present and future consumption, but it's precisely ignoring time preferences, as the state's monetary policy does, that gets the economy into a depression in the first place.

Unemployment or at least underemployment, in Keynes' opinion, was an essential feature of the market economy even in equilibrium. Free-market capitalism was eternally sick. Even an economist, and not just an entrepreneur, could see actual workers and capital goods idling. Therefore, given that a large amount of resources was sitting there doing nothing, there is no real trade-off between consumption and investment. Both could be increased together. Therefore the time preference theory of interest could not be true, or least it had little relevance to the economic conditions that Keynes was observing around himself. What then explained interest? Keynes latched onto another idea which was that interest was essentially rent the borrower paid on the lender's cash

balance. Keynes' liquidity preference theory of interest is not entirely bankrupt, but he is wrong in making it the primary determinant of interest rates. Hoarding decisions affect the interest rate in the extremely short run only, in the long run they only change the purchasing power of money.

How is it possible to condemn, as Keynes did, at the same time a high savings rate and low investment? Isn't it the purpose of saving to invest? Keynes lampooned excessive as he judged it concern with the future but also lamented a perpetual insufficiency of investment. What is investment, however, if not provision for an increasingly distant future? Keynes was worried that a high propensity to save would diminish the multiplier. He thought that saving will turn into hoarding, neither consumption nor investment. But people generally consume and invest continuously from their income month after month; they do not hoard continuously. (If they did, the economy admittedly would be in trouble.) Once they've decided to keep a certain amount of cash for precautionary reasons, they achieve their target balance and then hoard no more, spending the entirety of their income from then on. The demand for money of course fluctuates since it depends on individual and business preferences which change but not wildly. It's not the demand for money that we must look to in order to explain business fluctuations but the supply of it.

Keynes was not just a *monetary* economist; it's as if he perceived in the economy *nothing but* money. There is a woeful insufficiency of both consumption and investment, he writes. But the more consumption there is, the less investment, and vice versa. How can *both* be increased at the same time? Through inflation and credit expansion, says Keynes. Monetary policy will spur investment, and fiscal policy, such as his public works, will raise consumption. By lowering the interest rate down to zero, as though no real factors impinged on it, Keynes sought to abolish the "scarcity of capital." Manipulating the money supply is supposed to result in a massive boost to general prosperity. There are no limits, Keynes holds, to what can be accomplished by society as a whole with just money. To borrow from Mises (1996), Keynes was "guided by the idea that the height of interest rates as the free loan market determines it is an evil, that it is the objective of a good economic policy to lower it, and that credit expansion is an appropriate means of achieving this end without harm to anybody but parasitic moneylenders" (573). The government interferes with market price formation and sets the most important price in the economy, the rate of interest, to an arbitrary value unconnected with real supply and demand. It expects cookies for this senseless act of violence but gets the business cycle instead. As Jesus fed the multitudes with a few loaves and fishes, so the Fed and the banks have the miraculous power to create

money out of thin air. Far from being divine, however, the Fed is actually demonic, and when the devil does miracles, the results are less than stellar. It's not that Keynes believes that the interest rate can be permanently reduced below its natural rate, though this is not so. For Keynes there is no such thing as the natural rate; the interest rate is arbitrarily set by the authorities, and setting it to zero happens, in his view, to promote general welfare. Many of Keynes' shocking policy prescriptions, such as inflation or "stamped money" or socialism, are based on his theory of interest. He simply takes his errors to their logical conclusions, so what he wrote about Hayek, "how, starting with a mistake, a remorseless logician can end up in Bedlam" applies only to himself.

Keynes, like the Austrian school, emphasized uncertainty of the future as a prevailing human condition; unlike the Austrian school, Keynes got uncertainty wrong. Keynes' idea of uncertainty from which he deduced investor irrationality, the stock market as a casino, speculation as a vicious psychological game, violent instability of the marginal efficiency of capital was merely a bludgeon with which he attempted to destroy "classical" economics. Ultimately, he feared that individual liberty would result in economic chaos. Once he denied coherence to the free market, it became easy for him to devise interventions to make up for the alleged market failures. But it is not the case that the free market "fails" because of uncertainty; on the contrary, the market utilizes uncertainty to generate economic progress. There is a way to dispose of uncertainty altogether, and that is with socialism, but that destroys progress along with it. Keynes held that the fact that profit expectations under capitalism are uncertain resulted in less investment and higher interest rates than optimal. The possibility of the borrower's bankruptcy resulted in lenders charging a premium on loans. Uncertainty also, he felt, meant that the volume of investment was volatile and unstable. His condemnation of capitalist uncertainty led him to recommend socialism or as we saw "investment planning."

Modern policymaking is based on the ideas of Keynes. There is the presumption of "equilibrium with unemployment," such that mass involuntary unemployment is endemic and normal under laissez faire. There is the notion of a simple trade-off between unemployment and inflation. There is the belief that interest rates have a purely monetary cause and reflect no underlying scarcities of goods or trade-offs. There is the idea of an undifferentiated blob of "capital." There is the claim that the free market as a whole is subject to "irrational" waves of investor optimism and pessimism. There is the view that "liquidity preference" or hoarding is an evil that must be combated with fiscal policy. However, we are by no means "once again in the age of Keynes." The "policymakers" do not believe in Keynes or in any ideology for that

matter. Ours is the age of feelings not reason, indeed of every-man-for-himself looting and irresponsibility that are occasionally justified, when justification is insisted on, by appeals to Keynes. Even socialists no longer promise a new golden age with the arrival of socialism; all they seek is to destroy capitalism without presenting any vision of any glorious future to be built on the ruins of the old world.

Small states like local governments *would* engage in unlimited war, destruction, and rapine *if they could*. However, they are too weak fully to express their hatred for the citizens they rule. National governments, on the other hand, are always in pursuit of absolute power over their subjects. Sometimes they are frustrated in this endeavor by courts who affirm that there are such things as individual rights, other times by a common ideology as the people put pressure on the state through electoral politics. The historical role of Keynes was to convince the masses that government control over the economy was in their own interests. The 20th century was infused with socialist and interventionist ideas but for a time lacked an intellectual foundation for them. Western governments were already doing as they pleased when Keynes appeared and explained why their fake omnipotence was allegedly for the greater good. He was a prophet of statism and the inevitable disintegration of the economy.

I don't agree with the thesis of "policy ineffectiveness" of the monetary and fiscal policies. These policies *are* effective but only at destabilizing the economy and fostering poverty. They produce results opposite those their own advocates publicly claim they want to achieve. The monetary and fiscal policies are precisely the millstones of inflation and taxation in between which the bourgeoisie are to be crushed, as communists have sought to do.

The Keynesian idea is that by using the "tools" of the monetary and fiscal policies, the government can ameliorate the extremes of recession and inflation. But that's exactly like putting the fox in charge of the henhouse. It is precisely the monetary policy that causes the unsustainable boom that collapses into a recession. It is the Fed that, by printing money, causes money supply inflation that inevitably manifests itself in price inflation. And it is the fiscal policy that transfers purchasing power from the people to the state: behold, socialism has become intellectually respectable.

It is instructive to compare the vision of Keynes, of the Keynesian-Neoclassical synthesis (KNS), and of the Austrian school. According to Keynes, the free market works neither in the short run (because of business cycles caused by fluctuating aggregate demand) nor in the long run (because of uncertainty and nonzero interest rates). KNS has it that the market fails in the short run (because of rigid wages) but works in the long run (when wages adjust). And the Austrians argue that

the market works fine both in the short run and in the long run, uncertainty and steadiness of the price level notwithstanding, but certain external monetary shocks to it such as especially by fiat and credit money expansion bring about instability. Since Keynes did not possess the correct theory of business cycles, his "depression economics" is an exercise in futility. He does not diagnose what starts an unsustainable boom, and how to prevent one, nor how the boom turns into a bust, and how to recover from one. In fact, he thinks the boom is benign and wants to keep the economy booming forever without realizing that that's impossible.

Keynes was eccentric and iconoclastic in more ways than one, e.g., commenting on his endorsement of autarky, Skidelsky (2010) points out: Keynes' "idea that 'globalization' can lead to war, national self-sufficiency to peace, was of course a complete reversal of the traditional teaching" (189). He does not call this idea false, but I will. If there is *any* truth to it, it lies in the fact that the world's monetary system, with its hundreds of fiat currencies, endless inflation, credit expansions, devaluations[3], volatile exchange rates that wound international trade, is broken. But that, too, is Keynes' fault. It is amusing that a consideration of "fresh importance" for Skidelsky is that "Keynes kept alive the idea of the 'just price.'" But there are no such things as just prices. (Perhaps inflation that corrupts intertemporal contracts and injures creditors might be an example of injustice. But Keynes *despised* the "usurers" and was eager to see them fleeced.) Skidelsky might have said as well that a legacy of Keynes is that he kept alive the idea of the flat earth. Skidelsky's defense of this notion consists in noticing that "the idea of justice in exchange is a very old one, and is far from dead in the popular mind" (145ff). With this, as with so much in his economics, Keynes, far from producing new revolutionary ideas, merely revived ancient fallacies. Perhaps it was his lusty boisterous decadence that caused him to be seduced by paradoxical new, or rather (as the case may be) old and long discarded, ideas. It is a scandal that he got away with it.

Keynesianism in economics is as much a retrogression as paganism in religion. In paganism, the gods are always acting in the natural world. When it thunders, that means Zeus is angry. Likewise, the god-state constantly intervenes into the natural order of the economy, "correcting" and "fine-tuning" it. It pretends to help, to improve economic outcomes, but it always fails, and it gives the people no rest. Economists must rise up and slay the false gods to free the world from their destructive meddling. In this book I embark on this quest. Or, to use a Christian metaphor, the state is by its essence a Satanic institution, the principalities and powers, but it is a legitimate function of the demons to punish wicked humans. For example, it belongs to the state

to crush violently aggressive labor unions. Therefore, the state, or at least the executive branch of the separated powers on the local level, cannot be fully abolished. Its influence, however, can be confined to the hellish realms where it belongs and be prevented from reaching "middle earth" and its free markets.

Keynesian economics is a terrible evil that has plagued mankind for far too long. It defiled economic theory and damaged our economy. For that reason I felt that a thorough refutation of Keynes was needed.

If it is true that Keynes "was a wonderful user of the English language, but even more important was his passionate commitment to communicating his ideas in language which his readers could understand" (Skidelsky 2010: 58), the only conclusion about *General Theory* is that it was deliberately obfuscated and made confusing. There is as vast a literature devoted to divining "what Keynes really meant" as to what Marx really meant. There are as many interpretations of Keynes as there are Keynesians, each claiming descent from the master. The interpretation put forward in this book is, of course, my own.

Notes

1. E.g., John Cassidy's book cited here is entitled "How Markets Fail," and Richard Posner's book, "A Failure of Capitalism." The message is: those evil exploiters really did it this time!

2. Some economists call the unconverted "pre-Keynesians," as if separating history to before and after Christ. Even Jesus, however, did not seek to abolish the Law or the Prophets.

3. Devaluations increase "net exports" and hence, as Keynesians figure it, GDP and employment. But what happens when every country tries this grotesque short-term remedy?

Part I: Keynes

1. That Say's Law works adequately under laissez faire

The version of Say's law that Keynes rebels against affirms that in a free-market economy there are no permanent inefficiencies that leave either producers or consumers unhappy. The economy tends toward equilibrium. There is in particular no such thing as a "general glut" of goods that cannot for any considerable amount of time be disposed of by their producers.

Jones' money income comes from Smith's expenditure, says Keynes. In fact, this "insight" is supposed to be the essence of the Keynesians revolution. But it's only an illusion, a failure to pierce the money veil. When Smith pays money to Jones for something Jones has produced, Jones' income does not come from Smith's "pocketbook," unless Smith is dishoarding his cash balance; it comes from Smith's own production and the income Smith receives in its exchange. Goods are traded for goods, and money is only a medium of exchange.

Keynes phrases the law as that "supply creates its own demand." There seems to be no reason to sell unless one looks forward to buying. The only way to buy is to sell first: the purchasing power to buy is obtained by selling. The act of putting a product for sale indicates a demand by the seller for other goods. The imbalances in the system are due to temporary disequilibria which are correctable by ordinary market forces. There are three types of the relevant disequilibria.

First is between supply and demand (SD). If the price of a good is too high, there is a surplus; if too low, a shortage. Both surpluses and shortages are "bad," we don't want either of them. In the case of a surplus there is a sense in which there is "overproduction." This is an aspect of *consumption*. The SD disequilibrium can be fixed simply by lowering or raising the price of the good.

Second is between a firm's revenues and costs (RC). If the revenues exceed the costs, there is profit; if costs exceed revenues, loss. Profits are "good," and losses are bad, both for the entrepreneur experiencing them and for the economy as a whole. If a businessman is losing money, he again can be said to be overproducing. His business plan is unsustainable, and he is under the necessity to curtail the

production of whatever good is selling below costs in the future. This is an aspect of *investment*. The remedy for this is more difficult than in the previous case: the entrepreneur needs to become more competent or alert to opportunities. If he cannot, then he will be forced to forsake his vocation and become a mere laborer.

For example, perverse central bank policy will trigger a recession as part of the business cycle in which the economy is revealed to have been affected, during the boom, with a high level of discoordination, with losses far outnumbering profits. Malinvestments must be cleansed; failed companies, disappear; prices of remote capital goods and many wages, come down and be readjusted *relatively* for the economy to recover. Keynes maintains that trusting the equilibrating forces to operate is a naive course of action and suggests ways to increase aggregate demand instead. This, he hopes, will increase the particular demand for existing goods and therefore their producers' revenues and profits.

Third is between the past and present "price levels" (PL) which is an aspect of *hoarding*. Hoarding is an increase in the demand to hold money or cash balances. The purchasing power of money increases when people hoard more and decreases when they dishoard and spend. The hoarded money is like insurance: one never really wants to find himself in a position in which he needs to resort to using it. Other motives for hoarding or for keeping cash balances in general are outlined in (I, 18): e.g., the purpose of hoarding for insurance is to prepare for unforeseen future pains, while the purpose of hoarding to take advantage of presently unfathomed opportunities to consume or produce is to prepare for unforeseen future pleasures or challenges. The argument is that when there is an increase in hoarding, the *absolute* price level becomes too high, and it is this that can be interpreted as a general glut.

It is sometimes said that Say's law works for all goods other than money, or that it would work only if money were in fact a mere veil. It thus neglects the fact that money too is a commodity with its own supply and demand. But despite the fact that the allocation of one's income in any period between consumption, investment, and hoarding is each man's personal decision, entrepreneurs generally are able to function and make profits. Changing demand for money is no more an obstacle to them than changing demand for goods.

It's true that while for consumption lower demand for one thing entails higher demand for another, and for investment lower demand in the present entails higher demand in the future, for hoarding lower demand seems to mean just lower demand. But in fact the lower demand is simply a desire on the part of the public for a lower price level. There is no need for production to decline: for society as a whole

individual hoarding is a free lunch. As people add to their cash balances, prices of those goods for which demand has slackened drop, necessitating that the wages of the workers producing them drop also, causing income to them to fall off, so *their* demand declines too, resulting in still more prices falling, and so on. Under excess demand for (or rather quantity demanded of) money there is still no overproduction or general glut, merely the wrong price level. But the price level does not, and need not, decline all at once – which admittedly the market could not handle; rather prices decline in a sequence one after another. This is a mirror image of the opposite process of an inflationary stimulus fanning out gradually in the form of higher prices throughout the economy. There is no reason why a free-market economy needs to be more troubled by a rise in the demand for money (hoarding) than by a rise in the supply of money (inflation), provided that these disturbances are mild in intensity. It is true that some business plans will be shown to be faulty because of hoarding; such erring entrepreneurs might have been better off keeping their capital in the form of money in the bank and waiting for it to appreciate. Keynesians argue that if they had foreseen the new demand, they would have cut production, but in fact they would have cut first, prices, and second, wages. To the extent that they didn't foresee it, the problem is even easier. Nor should production decline in the longer run, once price deflation is fully absorbed, because their (lower) revenues will consist of money of higher purchasing power. In any case, the people's success at security seeking is more important than the entrepreneurs' success at garnering profits.

Theoretically, equilibrating PL disbalances requires only price changes and no alteration of production patterns. And since disequilibrium here entails that consumer desires – including the desire not to consume – are satisfied, both types of PL disequilibria are "good." That's not to say that this is always true in practice. What happened in the Great Depression was the recession explained by the Austrian business cycle theory (see (I, 37-40)) turning into a major depression due to the subsequent collapse in the money supply (itself due to failures of fractional-reserve banks and credit contraction) and the ensuing secondary price deflation that severely aggravated the problem. The reason is that while changing a single price can be done very quickly and with little effort, adjusting the entire price level downward, especially as the money supply keeps shrinking, takes a long time, proceeds in fits and starts, and can be attended by entrepreneurial errors. In the meantime, in lieu of full price adjustment, PL disequilibrium can feature quantity adjustments and hence unemployment.

John Egger argues that "all unemployment is caused by mispricing, and none by insufficient aggregate demand" (Skousen 1992:

43). This is true if we mean the corruption of wages due to anti-market violence preventing mutually beneficial agreements or corruption of the interest rate due to inflationary credit expansion. In the case of PL disequilibrium, specifically excess demand for money, however, these are the same. The mispricing is global, meaning that *all* prices are wrong. The problem can be remedied either with prices adjusting or with an increase in aggregate demand in money terms.

As an adjustment of this sort proceeds, the money rate of interest can temporarily deviate from its real value. (For example, dishoarding can lower the interest rate by its effect on the supply of money loans, and it can also increase profits by raising the demand for consumer goods.) But hoarding does not cause a cluster of entrepreneurial errors that is so characteristic of the business cycle.

It may be the case in a depression that numerous people hoard money. Still, hoarding is a result of individual decisions. There is no coordinated hoarding in which all people agree to withdraw large amounts of money from circulation. For this reason it is necessary to look at this problem from the point of view of an individual hoarder who is faced with the market data over which he himself has no control. For such an individual hoarding has clear opportunity costs: the hoarded money can be neither spent nor invested. Moreover, as other people hoard, prices fall, enticing him and others to spend.

Prediction of deflationary hoarding is part of the job of the entrepreneurs. Even when making such predictions is exceedingly hard, as predicting the bust during an economic boom, the fault for economic destructionism lies not with the hoarders but with those institutions that induced the boom-and-bust cycle in the first place. If the large crowd of losers during the bust is fed with government money, receiving windfall profits, then the market price signals telling them to quit producing are disregarded. These entrepreneurs (and society as a whole) are deceived, imagining that they can evenly rotate and even profit in the future. But when factor prices adjust, the equilibrating forces seek once more to purge the business losses from the system, thereby presenting the government with yet another opportunity to do things right and avoid the childish game of coddling the losers with empty “profits.”

It is true that hoarding can cause general price deflation that benefits creditors and harms debtors, but so what? If lenders and borrowers want, in contracting with each other, to hedge against the changing purchasing power of money, they are free to do so; if this practice is uncommon, this means only that people are willing to take their chances in this matter.

Lastly, hoarding in a depression has healing properties to be described in (I, 43).

The remedy for the PL disequilibrium under laissez faire is even

more involved: it requires a universal gold standard, free trade, an end to wars, abolition of the business cycle, and a steady general improvement in the people's standard of living. For example, in the absence of trade between isolated villages, a fluke in the weather that ruins the harvest means death to the entire population. Global free trade mitigates such vulnerabilities. People hoard in a depression because they are afraid of the future. Nip the business cycle in the bud through sound money and honest banking, and sharp fluctuations in liquidity preferences will come to an end. The enhanced economic security obtained thereby will make it increasingly less necessary for workers to keep large hoards of cash as insurance against an uncertain perilous future.

Hoarding under normal circumstances is not a significant factor that can vitiate Say's law and induce serious discoordination. In other words, this phenomenon is theoretically important but practically irrelevant.

SD is partial equilibrium, RC is general equilibrium, PL is monetary equilibrium. SD disequilibrium is a local pricing error, (bad) RC disequilibrium is a production error, PL disequilibrium is a global pricing error. It follows that if you can't sell your stuff, lower the price. If producing this stuff at this price is unprofitable, change your business model. And if *MV* falls in a recession, abolish government price controls, defang labor unions, end cartelization and price fixing, get rid of unemployment insurance (since wages will not fall if people prefer to go on the dole rather than work for less money), improve the quality of money and banking so as to eliminate the business cycle for good. Given these, aggregate demand just is aggregate supply, and there is no overproduction.

Say's law does not argue that there is never disequilibrium, but it affirms the equilibrating tendencies in the economy. Keynes demurs, proposing that the market does not always clear, which is why Say's law is suspect. It is part of the purpose of this book to describe what real and apparent features of the economy caused Keynes to believe that the market process was irrational or at least inefficient. Some of those are: (1) wage stickiness, (2) scarcity of money, (3) high (or nonzero) interest rates, (4) uncertainty of the future, (5) the business cycle, and (6) hoarding as opposed to spending.

It is true that Say's law can be disrupted by government interventions into the economy, but Keynes distrusts it for all the wrong reasons. Even in the case of the business cycle, the only phenomenon he notices that can in actual fact play havoc with the economy, he fails to identify its cause.

2. That the money illusion is implausible

Keynes makes the psychological claim that workers may sometimes care about their nominal wages more than about their real wages in order to shore up his inflationism. If wages are sticky downward which means that wages and prices cannot adjust relative to each other, then this could explain "involuntary unemployment." His solution to this pseudo problem is to trick workers who viciously would not take lower nominal wages into accepting lower real wages. Inflating the money supply would boost profits at the expense of wages and induce entrepreneurs to hire the involuntarily unemployed.

This opinion can be defended as follows. First, it is easier to calculate one's nominal salary than the price index of some arbitrary basket of goods. But this logic can only be taken so far, for, as Mises (1996) writes, "a judicious housewife knows much more about price changes as far as they affect her own household than the statistical averages can tell" (222-3). Now the purchasing power of money (PPM) is an intuitive and imprecise notion. This is because comparing the PPM at two different moments is hindered by (1) relative price changes, (2) improvements in the quality of articles, (3) emergence of brand-new products, (4) all-out disappearance of old products, (5) changes in the techniques and capital used in production (in short, the changes due to economic progress), and (6) the necessity of looking not at all prices but only at a certain subset of them, arbitrarily excluding everything else. Admitting the problem, Keynes uses the notion of "the public's standard articles of consumption" (*TM*: Vol 1, 223). Of course, there are no standard articles of consumption. Mises counters that on the market "every penny spent has the power to work upon the production processes. The publishers cater not only to the majority by publishing detective stories, but also to the minority reading lyrical poetry and philosophical tracts. The bakeries bake bread not only for healthy people, but also for the sick on special diets." (271) By whose authority are the consumers of poetry, etc. not given consideration? These complicating factors make determining PPM "scientifically" all but impossible while still permitting easy rough generalizations via "historical understanding." It follows that one cannot fool all of the people all of the time about their real wages.

Second, nominal income may for some people be a status symbol. A diminution of that income may strike them as an insult, a slight, as being treated with contempt, regardless of how economically reasonable and even necessary for them to stay employed the pay cut may be. It is as if the employee's faithfulness to the company has been betrayed. His seniority and years of service are not being properly appreciated or

given their obligatory "respect." But I think that in a competitive economy such thinking will be discouraged.

Third, a businessman who up and decides to lower his workers' wages across the board will be sort of punishing the workers for his own losses. Not only is this bad for morale, but it will also simply not work. If he lays people off, he retains some control over who goes and who stays. But reducing wages like this will cause many employees, including those who were fully pulling their weight, to jump ship, and the owner will have no control over that. This argument is much less powerful in a recession, though, insofar as *all* workers face unpleasant choices. Even if existing wage contracts are somewhat stable, *new* job offers are fully sensitive to new market data. There may thus be a temporary spike in unemployment during an economic downturn, but the wages the unemployed can obtain will be lower than during the boom. Even if there is mass unemployment, it will be frictional not involuntary.[1]

Chick (1983) produces the following additional arguments. Workers may "resist" offers of lower wages because "it damages their self-image, knowing the currently employed are getting more." But surely getting *zero* would seem even worse in comparison with the wages of the currently employed and would damage their "self-image" even more. Also because "it would diminish their human capital… if the new wage became established." But the "establishment" of a wage is a global phenomenon to which the contribution of an individual worker is miniscule. As for human capital, the longer one is out of work, the rustier his skills get. One is well advised not to have large gaps in employment on his résumé. Finally, "because willingness to work for less may be taken by the employer as evidence of these particular workers' inferiority" (145). But again not working at all is evidence of *supreme* inferiority. This attitude is particularly silly because a worker is not "unjustly" downgraded from a superior to inferior caste; his wages decrease simply by means of a change in market conditions, and he has no right to any particular wage. Nor need the willingness to work for less "signal" to the employer that the worker is unproductive if the employer too is fully aware of the market data.

These rather unpersuasive reasons are the most important ones that Keynes can advance if he is to justify his belief that wages are sticky downward. Other ideas either attribute irrationality to market actors, fail to differentiate sufficiently between wages and all other prices which are presumably less sticky or not at all, or depend on lamentable government interventions into the free market, such as pro-union and minimum-wage legislation which are merely signs of our corrupt times and have no compulsion to exist.

For example, if most workers are subject to the money illusion (in

which they value the money wage more than the real wage), then those cleverer workers who see the truth can demand higher wages and win in the competition. There is a powerful incentive to each worker to pierce the illusion and see reality for what it is. One cannot build an economic theory on the basis of human irrationality since being rational pays off, and being irrational condemns. Irrationality is self-liquidating. Now those economists who advocate a predictable "rules-based" monetary policy do not grasp that monetary policy can only "work," that is, increase employment in the presence of wages coercively set above market-clearing values, by deceiving the public. There is simply no *point* to any "policy," indeed to the central banking system itself, without the hanky-panky (other than as a socialist-destructionist means to empowering the state). But secrecy cannot plausibly be maintained. L. Albert Hahn (1949) makes the point that "psychological phenomena like the money illusion become obsolete when they are discovered. If Lord Keynes has discovered the mechanism of lowering real wages through monetary manipulations, he has at the same time destroyed the working of the mechanism by drawing attention to it." (62) The money illusion cannot be a permanent feature of the economy.[2]

To the extent that governments are led by the logic of money supply inflation to resort to price controls to combat price inflation (thereby destroying the free market and unleashing economic chaos), they demonstrate their awareness of the fact that money illusion is a feeble reed to hang "full employment" on.

Keynes tells us breathlessly that "workpeople in fact stipulate, not for a real rate of wages, but for a money-rate" (*GT*: 272). That's true but it's a consequence of the fact that under indirect exchange *all* prices are quoted in money terms. Nothing significant whatsoever can follow from a proposition so general, least of all the alleged ubiquity of "involuntary unemployment." More specifically, Keynes proposes that "it is because of money's other characteristics – those, especially, which make it liquid – that wages, when fixed in terms of it, tend to be sticky" (*GT*: 233). Yes, money is liquid, that's just the definition of money as a medium of exchange. Liquidity measures the ease of convertibility of an asset into money (and the security that the asset will not have lost value at the time when it is sold), and money is perfectly convertible into itself. What has that to do with wages? Keynes means that sound money cannot be produced out of thin air and so real wages cannot be brought down by inflation.

In a free-market economy blessed with a noninflationary monetary regime, the "price level" will be stable or decline slowly due to general economic progress. A good example of "rigid" prices despite vigorous quality competition is the information technology industry. In the past two decades, computers have improved with respect to some

physical parameters 1,000-fold or even more, but their prices have hovered around a constant value and may even have dropped if we adjust for inflation. There is nothing economically perverse in this.

Modern-day Keynesians bring in other reasons for price inflexibilities. The first one is "listed prices." These refer to the fact that most stores do not allow negotiations between salesmen and customers. (It would be too time-consuming or inefficient, the salesmen would not have the authority to change prices, etc.) Moreover, one does not generally go into a department store, buy up all the shoes, and attempt to resell them at a profit, meaning that there is no instant arbitrage. However, these features of today's economy do not prevent equilibration of supply and demand. The owners will set prices by trial and error and with understanding of past prices in such a way as eventually to dispose of their entire stock. Arbitrage can take place at the level of the suppliers or wholesalers in the structure of production. The quantity produced every day will depend on profit expectations at the contemplated prices.

Menu costs and long-term contractual agreements are alleged to be responsible for other instances of inflexible prices. A restaurant, say, would incur the cost of printing new menus every time it wanted to update the prices of its dishes. It may be cheaper to keep prices stable if these costs are prohibitive.

Consider though, first, what rigid prices imply. It is a (rather whimsical) definition of insanity that it consists in doing the same thing over and over again and expecting different results. An alternative definition might be doing the same thing in response to different environments and expecting the *same* results. Mulishly keeping prices the same in an always changing market amounts to precisely that. Therefore, the Keynesian insistence on price rigidities is tantamount to presuming market participants to be – literally – nuts. And that is far too strong a condemnation to be true. Human beings go to enormous lengths to earn a living. Surely, they can be expected to strive to minimize menu costs and avoid long-term contracts whenever possible.

For example, it is unsatisfactory to have to choose between a small loss from wrong prices and a greater loss from printing the menus. If menu costs are high, then people will simply not start the businesses that lay themselves vulnerable to such costs in the first place, thereby easing competitive pressures on those entrepreneurs who *still* decide to operate such businesses. Menu costs are not some fundamental metaphysical evil in the world like scarcity or inevitability of death, such that fixing them is beyond human power. What's interesting is not a diagnosis of this problem by an economist who has studied the market at the present time but precisely how entrepreneurs will seek to lower the menu costs in the future. Where there is a will, there is a way, and

we can be assured that with economic progress solutions will be found.

Long-term contractual agreements are useful if there is a need to prevent a worker with unique skills that are impossible to replace easily from blackmailing the employer. Thus, an actor starting work in a comedy show may be required from the outset to limit his future demands if the show becomes successful, lest he threatens to leave and ruin the show (which is defined in the minds of the viewers by the actors). It's a kind of bilateral monopoly. The idea is to make prices sticky *upward*, i.e., to lock in the prices of resources, for the length of several periods of production and thereby reduce surprises in calculating costs and revenues. I agree that the darker side of this is that prices are also made sticky downward. But how is that beyond the economic pale if the benefits of this practice outweigh the costs for all concerned?

There is a variety of business models, some of which may involve wages or prices that tend to stick. This, however, would most likely be a benign practice that hurts neither the buyers nor the sellers.

"Another explanation for price stickiness," writes Thomas Hall (1990), "is the notion that many firms routinely engage in markup pricing, basing their pricing decisions more on the cost than demand considerations." (111) The idea is that this way companies can be free from the vagaries of consumer demand. But in the first place, costs of production fluctuate, too. And second, firms that used this sort of "strategy" would be irrational and ensuring their own destruction. One cannot make business decisions by calculating the costs of production of an arbitrary item, adding a no less arbitrary markup, and pricing the product with this sum. A businessman does not pick a random good out of thin air, say, shovels or mushrooms or kittens, slap a markup on it, and get busy producing it. How would he decide, out of millions of possible production processes, which one to undertake on the "markup" pricing strategy? Any good can be marked up. And how would he determine the value of the markup? The sky seems to be the limit. Further, the demand curve suggests not only the price but quantity supplied, as well. Without it, what determines how much output a firm engaged in markup pricing will produce? In short, costs of production determine not prices but whether a given good will be produced at all. Finally, why wait for a change in costs if one can profit from changing the price immediately? Why not charge whatever the market will bear?

John Hudson suggests that a firm may be "often faced with the cost of dismissing unsatisfactory workers and rehiring others. To minimize such costs the firm may pay above the market wage, reasoning that workers know their own abilities and poor workers will recognize that this is a job that they will soon be fired from and hence not apply." (King 2003: 114) This is supposed to explain why wages may be set above the workers' discounted marginal value product (DMVP). But of

course any wage rate voluntarily agreed upon is a "market" wage. Furthermore, it is the definition of "unsatisfactory worker" that his wages are not justified by his productivity. A "good" worker may be quite unsatisfactory if he is overpaid, and a "poor" worker may be an asset if his wage is sufficiently low. What the firm is actually doing is simply getting better workers at higher prices, a perfectly ordinary behavior. Finally, this strategy is entirely self-defeating if *every* firm is engaging in it.

A firm that has earned especially high profits this year may indeed want to give its employees a bonus in hopes of reducing labor turnover. But clearly a one-time payment like this is the opposite of "rigidity."

New Keynesians bring in other reasons for wage stickiness. There is, for example, "implicit contract theory" according to which a worker would agree to a long-term contract for a fixed lower wage. The worker would then apparently forgo raises in exchange for job security. This seems irrational. If a company can't afford raises in a given year, it will deny them explicitly. Why would a worker agree not even to *ask* for a raise? If a worker wants a low wage, he can just take it, he doesn't have to sign a long-term agreement in addition. He will be an asset anyway, contract or not. And even underpaid workers can be fired if the company is badly run and losing money. Finally, workers with such low self-esteem that they are willing to slave away thanklessly just to reduce the possibility of having to look for a new job are probably rare.

Another interpretation of implicit contracts is that "workers would prefer wage stability to employment stability" (Bellante in Skousen 1992: 126-8). I know I wouldn't. What sense is there in resenting a change from a higher wage to a lower wage more than a change from some wage to zero wage? But perhaps it means that a worker will trade off a higher wage for a *chance* of being fired in a recession. Maybe he's gambling man. If every worker is like that, then they all bet that it will be the other guy who will get fired. This Russian roulette does seem vicious as it harms production. It's an empirical question whether such apparent irrationality is prevalent. But if it is not universal, when risk avoiders agree to lower wages, this puts pressure on the risk preferers. They will be the ones targeted for termination. The more reasonable workers are hired, the greater the risk to the gamblers; some marginal gamblers will buckle and agree to a lower wage, increasing the threat to their former brethren; this will strengthen the incentive to them to agree also, and so on in a snowball effect. Gambling of this sort then is unstable and will be discouraged.

The alleged "market failure" of "asymmetric information" is another bugbear. Workers do not know for sure that the demand for the product of the company they work for has declined. They will distrust

the management and refuse to acquiesce to lower wages until the downsizing actually begins, at which point it'll be too late. I suppose it's possible that stubborn and suspicious parties can fail to come to a mutually beneficial agreement. But it's not the high demand for its product that prevents a company from lowering wages, it's the competition. If a company can afford to cut wages, it will do so, regardless of the demand. Workers are always on a lookout for better opportunities, and it is this, and not "asymmetric information," that can make them unwilling to accept lower wages. If there are no such opportunities, they're plain out of luck and are forced to deal. Lastly, except in cases of general price deflation, lower demand *requires* that the company shrink. This way resources, including labor, will be reallocated to those lines of production the demand for which has risen.

The idea of "efficiency wages" that claims that a worker's productivity can be increased by a higher wage is obscene. No manager thinks, "I want Smith to do a better job, therefore I will raise his salary." If he raises the salary of a slothful or inefficient worker, then far from encouraging productivity, he'll just be subsidizing sloth and inefficiency, thereby getting more of them. He thinks instead, "Smith has been doing very good work lately; I want to make sure he stays with this company; to that end I will raise his salary since we can afford it." Keynesians claim that wages are sticky because lowering them also lowers the productivity of the workers. But this is implausible. What a lower wage can do is cause a worker to quit. But in a recession he is out of options, anyway. He will be grateful to the company for not firing him. Even if there is some efficiency link between wages and productivity, such as a higher wage spurring a worker's efforts (such as because it becomes costlier to shirk and risk getting fired), no particular nominal wage corresponds to any given level of productivity. In a recession, each worker realizes that he competes for scarce jobs with all other workers, and it is this fact – the threat of being outdone – that causes him to excel, to strive to raise his productivity. In such a situation a particular productivity can be obtained by firms for less money wages.

It does not seem therefore that paying efficiency wages is a plausible substitute for good management on the employer side and for work ethics on the employee side. Cheating cannot be eliminated that easily; the lazy, the malicious, the incompetent need to be weeded out by other means. But if it could be, the argument is that the combined effect of *every* firm offering efficiency wages is unemployment (since then quantity supplied of labor exceeds quantity demanded) which in itself causes workers to fear being fired and value their present jobs more and thus raises their productivity. But unemployment does not follow if overall worker productivity is higher, since then revenues increase and companies are driven to expand, thereby hiring more labor.

In other words, the demand curve for labor shifts to the right, restoring equilibrium.

If a company does not discriminate between employees of different quality and pays both superior and inferior employees the same, then this is a problem. Some workers are overpaid and are a drag, others are underpaid and will soon quit. But raising the wage indiscriminately seems pointless: it improves the situation on one end only to worsen it on the other.

Allow me to illustrate another argument of this sort with an example from biology. Ants display an interesting behavior. Any time a group of ants is dragging a caterpillar or leaf or some other useful to them object toward the ant hill, some of the ants are indeed dragging it *toward* their home, while others, bizarrely, are dragging it *away* from it; it is just that the number of the ants moving in the right direction is greater than the number of the ants moving in the wrong directions, and so the item slowly advances toward its destination. It may be contended that companies are somewhat like that. If most of their employees' productivity exceeds their wages, then they tolerate a few bad apples hiding here and there who do not, on the contrary, earn their keep. They remedy the situation only occasionally, such as during yearly employee performance reviews. The excuse is that the cost of the reviews is very high.

Note what this means again, however. Apparently, what is difficult is *calculating profit and loss*, whereas the market system is designed *around* the ability of individuals to look after their own self-interest. Even if reviews are rare, if a company is suddenly experiencing losses or even a general considerable diminution of its profits, then I guarantee that it is going to decide to conduct reviews very speedily and cost-effectively or go bankrupt. To the extent that some large corporations have slow-to-react bureaucratic management, the alleged difficulty of performance reviews is the least of their problems: such companies, barring government subsidies or protection or monopoly privileges, are already half-dead and on their way out. In addition, if carrying out reviews is presently so expensive, then this work will be a gold mine for consultants who could offer advice and assist companies with doing the reviews. Their entering the industry will assuredly serve to lower prices.

Another reason why wages *seem* to be sticky downward is that we're inured to perpetual money supply inflation and its usual consequence of price inflation. But inflation is not inevitable like death or even (allegedly) taxes. It's a consequence of our vicious system of money and banking.

As far as Keynes is concerned, however, all these considerations are irrelevant. For him, prices are not endogenously sticky for reasons

that can be debated; they are exogenously assumed to be fixed. The supply of and demand for labor, according to the "classical" view, determine both the wage rates and quantity of work. Keynes gets rid of the supply curve, argues that wages are fixed at a certain level, and that quantity is inadequate. The way to increase quantity then is to shift the demand curve to the right. Enter monetary and fiscal "policies." The obvious question to ask is why wages are fixed at the level at which they are fixed. What determines this level? Why would employers and workers agree to wages that they realize will be stuck to their own future disadvantage? Keynes supplies no answer to this question. He has no theory of wages.

Price flexibility does not mean that prices will vary randomly. It does not mean that we approve of chaos with prices fluctuating wildly every day. It means that sellers are, or should be, free to update the prices they charge, or indeed refrain from doing so, as they see fit, as it serves their interests, specifically in response to new information or changing market data. The main reason for the stability of prices is simply the stability of the money supply if it is indeed stable, mildness of fluctuations in the velocity of circulation of money, and the fact that most of the economy in short run evenly rotates, with entrepreneurial changes actuated by net savings and novel investments happening on the margin. The free market permits menus, long-term contracts, and so on because it counts on these stabilities. Wages are sticky not because they *can't* change but because people *find no reason* to change them often. The government and the Fed break the economy during the boom and then during the bust blame the market for not instantly accommodating the need for significant price adjustments which allegedly justifies still more interventions.

A business practice like sticky prices may be efficient under laissez faire and not so efficient under interventionism. The market resists the corruption to the extent that it can – for example, prices come completely unstuck during hyperinflation. But it is as senseless to condemn the market for losing to the state as to condemn the body for being damaged by poison.

The assumption of rigid or sticky wages is one of the pillars of Keynesianism, and we'll see how Keynes uses it in the next chapter.

3. That an "unemployment equilibrium" cannot exist

Mises (1996) did not explicitly use the term "involuntary unemployment," but he would approve of defining it as the existence of

> men, who, although able and ready to work, cannot find

> regular jobs because there is no room left for them in the social system of production. … They are poor or paupers in the old sense of the term, supernumerary and superfluous, a burden to themselves and a latent threat to the minority of their more lucky fellow citizens.

Even though the wage rate of an unemployed person is zero, business firms have no resources left to pay that person *anything* for any work he is capable of doing. He cannot find work at *any* rate sufficient to sustain his life. He cannot contribute to any production process whatsoever. In short, he is supposedly dying of hunger in the middle of a large city. If such is the state of affairs, then that person is unemployed involuntarily. Mises goes on:

> As far as there is unhampered capitalism, there is no longer any question of poverty in the sense in which this term is applied to the conditions of a noncapitalistic society. The increase in population figures does not create supernumerary mouths, but additional hands whose employment produces additional wealth. (836)

It is precisely this claim that Keynes disputes. His definition is:

> Men are involuntary unemployed if, in the event of a small rise in the price of wage-goods relatively to the money-wage, both the aggregate supply of labor willing to work for the current money-wage and the aggregate demand for it at that wage would be greater than the existing volume of employment. (*GT*: 15)

Keynes' contention is that a small change in real wages affects employment if and only if there is involuntary unemployment. Here is the argument:

1. People are resistant to the lowering of their nominal wages.
2. People are much less resistant to the lowering of their real wages if their nominal wages remain the same.
3. Therefore, a sufficiently small decrease in real wages will not cause workers to work less or less hard or go on strike.
4. But such a decrease, if brought about by higher prices of "wage-goods" (i.e., consumer goods), will garner higher profits for companies.
5. These profits will not be eaten away by the presently employed workers' demands for raises (from (3)).
6. Some of those companies will choose to use a part of those profits to employ more labor.
7. But if they succeed, then there was not full employment.
8. Therefore, there is involuntary unemployment.

The argument works if there is an increase in some or all prices unaccompanied by a corresponding increase in wages that would equalize wages and productivity. Then the only way for companies to grow is to employ more people, and that is possible only if there was involuntary unemployment. It involves a counterfactual: *If it were the case* that the profits of various companies suddenly increased by a small amount due to higher prices of their products, as if by magic, and with no attendant losses to other companies, yet none of those companies could expand operations by hiring additional labor, *then it would be the case* that at present there is full employment. The demand for labor increases because of the rise in prices, and the quantity supplied of labor increases because the unemployed become up for grabs, whereas before, though they were counted among the labor force in toto, they were somehow unemployable.

Keynes' contention then is that there often prevails under laissez faire an equilibrium with involuntary unemployment. His argument starts with an evenly rotating economy and then, as a mental experiment, raises revenues of business firms, so as to test whether excess labor is out there and available. To the extent that the experiment could be conducted in the real world at all, and very roughly at that, it would have to be by means of the government's fiscal policy, such as borrowing and spending. The setup would be something like this: (1) the economy is left alone for a long time with unemployment persisting throughout, then fiscal policy comes to the rescue which (2) diminishes unemployment (3) unambiguously due to the policy. In other words, there is involuntary unemployment in the case when if prices were to rise relative to wages, or presumably for that matter if wages were to fall relative to prices, more people would be hired; unfortunately, this cannot *actually* happen because the system is already in equilibrium. How shall we evaluate this opinion?

As Henry Hazlitt (1959) argues, it's nonsense because in an evenly rotating economy, given an unchanging set of market data such as consumer tastes, time preferences, technology, resources, everyone is fully employed by definition. Unemployed labor *entails* disequilibrium. Then there is Walras' law. Suppose that the market for *X*, such as labor, is in disequilibrium with too high a price and quantity supplied exceeding quantity demanded. With this excess supply, the amount of labor that people *expect* to sell is higher than what they *actually* sell. If this situation persists, that means that the market actors are ignorant of easy ways of gaining from trade. But if people are deceived about what they can sell, that is, if planned sales of *X* exceed actual sales, then they are to the same extent deceived about what they can buy, and the planned quantity demanded of some *Y*s elsewhere in the economy exceeds actual quantity sold. Hence the market for at least one *Y* will

also be disequilibrated. An error in one market spills over to mirror-image errors in other markets. There cannot therefore be an equilibrium (*everywhere but* in the labor market) with unemployment. Now perhaps Keynes means that this disequilibrium cannot be equilibrated. It's true that "free market" and "involuntary unemployment" are not *logical* contradictories, though *economic* logic suggests that they cannot coexist. "Involuntary" unemployment might at first glance seem to mean that there is some coercion involved such as by the government or labor unions. This is not Keynes' idea. There can be unemployment even in the absence of any untoward interventions. Keynes' reason for proposing this is simple: if you want to empower the state, as he did, you must first claim that the market economy fails. Marx held that capitalism was *brain*-dead as suffering from "anarchic," uncoordinated production. Keynes proposed that it was the market's *heart*, the price system, that stopped. Ways of animating the corpse could now be devised.[3] There is, Keynes goes on, perpetual insufficiency of aggregate demand or spending on both consumer and capital goods. The "propensity to consume" is too low, entrepreneurial profit expectations are too chaotically volatile, and the interest rate is too high. But how can (private) consumption and investment *together* which make up the entirety of income be insufficient? Changing demand for money accounts for the gap between spending and income. Keynes feared and condemned individual hoarding. Extra employment and extra production will not create sufficient demand to buy back the product, he believes, because some of the new income will be hoarded, and the attempt to increase employment will be defeated. This is what in (I, 1) I called the price level or PL disequilibrium and what Leland Yeager (1997) calls monetary disequilibrium which is admittedly of some importance. Walras' law does not say anything specific about money, but we can say that the excess supply of goods at the old price level is due to the excess demand for money.

Keynes then assumes that wages are fixed or rigid in which case of course PL disequilibrium must result in quantity adjustments. Hoarding will produce unemployment and dishoarding will relieve it. Demand for money is the root of all evil. Keynes may be thinking that lowering wages one after another in the presence of PL disequilibrium is less efficient than raising all prices of consumer goods at the same time through monetary policy. But the latter is impossible. Prices too rise one after another in sequence in response to money supply inflation. Prices of consumer goods do not rise all at once any more than wages fall all at once. It may be that raising prices is somehow less costly for the economy than lowering wages which are stickier. Now price level equilibration, *while it's going on*, changes relative prices. Some of these prices are more flexible than others. But in the long run the web of

relative prices is restored to its prior level. If workers realize what is happening, they need not "resist" this process, and those who don't realize it will end up on the street anyway.

Another way to see this is by means of the equation of exchange, $MV = PQ$. Excessive and rigid wages will raise the price level P but at the expense of quantity Q. And Q will drop because of unemployment. This is different from a drop in the population causing higher P. Consider the extreme case of everyone but one man dying with just one firm remaining in business. If M is $10 trillion, then this guy will produce 5 widgets / day, get paid $10 trillion / day which he will spend on the widgets at $2 trillion / widget. So V will stick around, and P will rise to compensate. An entrepreneur will then have a certain money stock, such as received from previous sales revenues, and with a smaller supply of workers, he'll be bidding up wages. Higher wages will be spent (on fewer goods), bidding up prices. So P, the wage-price level, will rise. In this case fewer people working will cause higher money wages, whereas with involuntary unemployment, it is the mandated above-market wages that cause a drop in Q and rise in P. Thus, for example, if the government tries to fight a recession by keeping wages high, hoping to stimulate aggregate demand, then instead of raising the velocity of circulation V, it will just get unemployment (i.e., lower Q). Not even a socialist economy can mess with V that easily.

If wages are flexible though too high at the present price level (as during a bust), and in addition there is excess demand for money (as during a secondary deflation), then wages will fall faster than prices, still creating profit opportunities for entrepreneurs from offering jobs.

On the other hand, if unemployment is due not to excessive wages enforced with violence but to a bust within the business cycle, then V does decline alongside Q (because the unemployed are not spending), and P need not change. Unemployed workers diminish the demand for the goods that are still being produced, but employed workers increase this demand because there are fewer goods for them to spend their money on. So it's a wash.

Keynes attaches enormous weight to the idea that the people who save may be distinct from the people who invest. But so what? That's just division of labor. We may as well say that there is a problem with the fact that bakers are different people from tailors. A crucial purpose of banks, for example, is to act as intermediaries connecting savers and investors. If they perform this function well, to that extent prosperity is increased. And banks themselves are becoming almost obsolete, especially in the age of inflation and ultralow interest rates, since today investing directly for any saver is only a few mouse clicks away. If this is so, then as Keynes himself admits, "all the rest follows – the social advantages of private and national thrift, the traditional attitude

towards the rate of interest, the classical theory of unemployment, the quantity theory of money, the unqualified advantages of *laissez-faire* in respect of foreign trade…" (*GT*: 21). The reason for the distinction is that Keynes thinks that investment is wild and unstable and is traded off with hoarding capriciously.

Note that in equilibrium "investment" has nothing to do with employment or income to the original factors of production. The entirety of money income to these factors within the entire structure of production comes from consumer spending. In the real economy with constant change, it is true that in each round of production entrepreneurs will invest their money in a slightly different way than in the previous round. Nevertheless, much of the money that entrepreneurs invest in each round comes to them from the sales revenues in the previous round. Few businesses operate for a single round and then shut down. Investment affects employment only in the context of the business cycle. But that's only because of the mass losses engendered by perverse monetary policy and the consequent impossibility of even rotation on the part of many firms. It's only because entrepreneurs have failed to profit or at least break even in the previous rounds that they fire employees in the next round.

Even if the manifestly contrary to fact claim that we have, or had by 1936, reached stagnation under which there are no "profit opportunities" were true, this would not cause any gap between income and spending.[4] If no new investments are possible, why save only to hoard? Why not consume instead?

A sufficiently powerful shock to the system, Keynes proposes, will upset many profit expectations and cause people to substitute hoarding for investment. This resulting PL disequilibrium, with the general price level being too high, that is difficult to fix will produce a depression. This isn't much of a theory of business cycles, and it's simply false – that's not how business cycles come about.

Another idea by Ventelou (2015) is that the sales revenues received by entrepreneur Smith depend upon the spending of the factors of production who receive income from employment in firms elsewhere in the economy. If other entrepreneurs are fearful and pessimistic and abstain from investing, incomes drop, and Smith's own business suffers. Smith himself then loses confidence which in turn affects other businessmen. Fear and optimism then are contagious and snowball. "The process of estimating economic reality, and its validation, is not just self-fulfilling; it is *self-referential*, or, as some systems analysts like to say now, *recursive*. Everyone looks around to see what others are doing. Business owners are driven to imitate each other." This accounts for violent and unpredictable swings in business confidence, therefore investment, therefore employment. This explanation of business cycles is

the opposite of that supplied by the real business cycle theory (see (II, 17)): "Expectations about reality create reality." (115-6) There may be something to this "ideal business cycle theory" in a very small, almost Crusoe-Friday, economy, though even there price adjustments will contribute to equilibration. But it has zero plausibility in the real world. In addition, businessmen seek not to imitate each other but precisely to differentiate themselves from each other, that's the only way for them to earn profits. Jones' pessimism feeds not *Smith's* pessimism (because of infinitesimally lower aggregate demand) but on the contrary his *optimism* because Smith can now capitalize on one of his competitors' weaknesses.

Robert Dimand proposes that when Keynes says "equilibrium with unemployment," he "really means" *dis*equilibrium with unemployment: "making money wages more flexible by eliminating trade unions, minimum wage laws, and the dole might just make things worse. … involuntary unemployment might be a disequilibrium phenomenon, but the system might not have any mechanism to move it back to the full-employment equilibrium after a sufficiently large negative demand shock." (Bateman 2010: 98) This desperate attempt to rehabilitate Keynes (by putting words in his mouth) fails because price changes are precisely one essential part of how equilibration within the free market occurs. (Flexible prices are a necessary not sufficient condition, since the market may be crippled in other ways that may check equilibration.) One may of course deny that the market tends toward equilibrium at all. But then one is no longer an economist. There is nothing to *study* under the assumption that the economy is pure chaos. No, Keynes assumes rigid wages and, to justify his remedy for them, invents the idea of "aggregate" supply and demand.

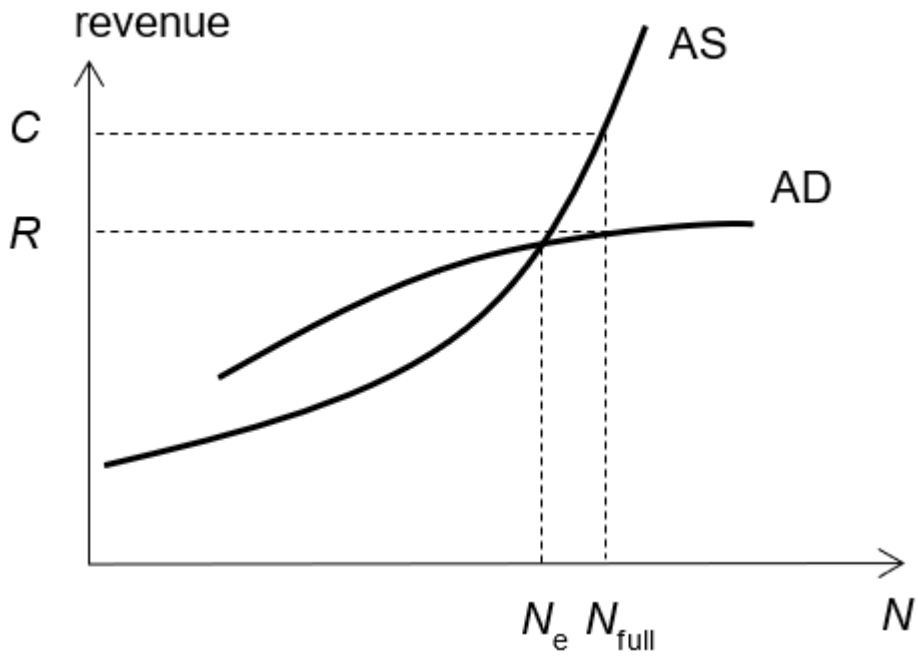

Figure I.3.1. Keynes' aggregate supply and demand.

In Figure I.3.1 aggregate supply AS is all the revenues entrepreneurs would need to generate to want to employ different amounts of labor. Aggregate demand AD is what they actually expect to receive by employing this labor. The intersection of the two curves is Keynes' effective demand, or equilibrium at less than full employment, $N_e < N_{full}$. At N_{full} then the total costs of production to firms C exceed the total revenues R. Nominal wages w are fixed and are too high, so AD which affects the price level p picks up only N_e which may be less than full employment; shifting AD upward raises the prices, therefore lowers real wages w/p, therefore raises N. Unfortunately, these are fake, screwy curves, Keynes made them up out of whole cloth. Keynes claims that thus dehomogenizing aggregate supply and aggregate demand is what makes his theory "general," with the curves being identical being a mere "classical" special case. As we'll see, however, there is no reason to keep them distinct. This faux sophistication is just another Keynesian illusion.

If wages are flexible, then raising AD is not necessary for full employment, so it is wage rigidity that is the implausible special case of an economy wounded by the state. If wages are rigid, then it's not sufficient. This is because employment is promoted when *individual firms* make at least the going rate of profit or profit equal to the rate of interest. It's not a matter of just total spending. Unanticipated inflation can indeed knock an ossified system toward better coordination. Some firms might find themselves in the black. This result is incidental,

random, short-term, and an invitation to further inflation.

The free economy's alleged property of a large unemployable underclass, even if for some Keynesian reason it was there, must be highly unstable because any one of these people can become an entrepreneur and pick up the other unemployed as workers for some ridiculously low price. Complementary to them capital goods can be rationed among the workers. Even if one has savings, the longer he is out of work, and the more the savings dwindle, the more amenable he will be to working anywhere even for low wages.

4. That Keynes' AS/AD makes little sense

In Figure I.3.1, AS links the independent expected aggregate revenue and dependent employment, AD links independent employment with dependent actual revenue. Overproduction allegedly occurs above equilibrium: by offering employment at N_{full}, entrepreneurs expect to receive C in revenues but are disappointed and receive only R. As a result, this level of employment is unsustainable, and it will drop back down to N_e, resulting in an unemployment equilibrium. Keynes gives no plausible reason, however, for these mass losses.

The economic meaning, if any, of these macro curves is distinct from that of the micro curves which would plot (price * quantity) against employment of factors within a firm. In the micro world, the shapes of the supply and demand curves would stem from the laws of diminishing marginal utility and increasing marginal cost. For a single firm, as it hires workers, two things happen. (1) The quantity supplied of its product (widgets) increases which necessitates that the firm lower the price of each widget. Hence, the marginal product of each worker, i.e., the amount of revenue that a marginal unit of work yields for the company, declines. (2) At the same time the marginal cost of a worker increases because workers are plucked from increasingly more important uses in other parts of the economy. At some point the marginal revenue will be equal to the marginal cost, and that is the equilibrium.

It follows that the supply curve slopes upward at an increasing rate, representing the law of increasing marginal costs (more workers * higher wage), and the demand curve slopes upward at a decreasing rate and may even come to slope downward depending on the elasticity of demand, representing the law of diminishing marginal utility (higher quantity * lower price).

The first point is that it would be illegal to use the two microeconomic laws to justify our macro curves. For example, we might be tempted to argue that high level of investment (on the AS curve to

the right of N_e) creates many jobs but causes there to be insufficient revenues (on the AD curve underneath the point on AS) such that there is an excess of losses over profits in the entire economy. Analogously, "underinvestment" entails many missed opportunities in which case total profits outnumber losses. These wake up the equilibrating forces which move the economy into a state in which profits and losses are in balance. The problem with this is that the level of investment does not determine whether an economy is progressing or retrogressing. Profits and losses are due to entrepreneurship or *direction* of investment, not the raw amount of money savings slated for investment (or *volume* of investment). Even at effective demand profits and losses accrue to different companies and are both disequilibrium phenomena. The alleged equilibrium is a mirage.

Here's another idea. For the AS curve, with more people working, the volume of output will increase. But what about prices? If we are talking about the general price level, then given a stable money supply, more people + more goods will result in higher demand for money, *lowering* the price level. For the AD curve, Paul Davidson (1978) argues that "expansion of the flow of production in our economy often involves the hiring of less-skilled workers and the utilization of older, less-efficient equipment and therefore, adds to diminishing returns" (341). This may be interpreted as the point that more efficient workers are worth disproportionately more to the company than less efficient ones. It's true that more competent workers make a given amount of product with less of both consumption and depreciation of complementary to them capital goods. Such workers also tend to lower management costs. Still, everyone's skills have a price at which they will be bought. Perhaps Davidson means that during a boom people who work overtime are less efficient on average than they would be working normally, or that people are drawn into the workforce who would otherwise be studying. I agree that within many companies there may be excess capacity and perhaps even more and less efficient idle equipment. It is plausible that superior machines will be used before the inferior ones. So higher employment will cause *output* to be increasing at a decreasing rate. But whether there are more people working receiving lower wages or fewer people working receiving higher wages need not predictably affect *total business costs*; likewise, whether there are more goods at lower prices or fewer goods at higher prices need not affect *total business revenues*. As a result, not only are AS and AD identical, but they can be drawn as horizonal lines.

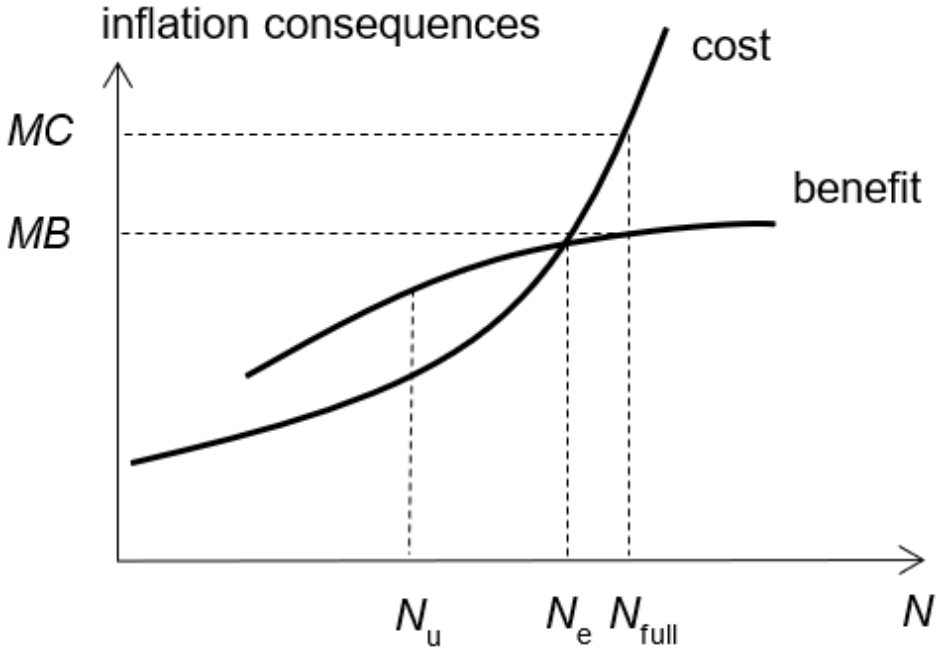

Figure I.4.1. AS/AD as unemployment vs. inflation.

It may be possible to reimagine AS/AD in terms of the Phillips curve which is an alleged inverse relationship between inflation and unemployment as in Figure I.4.1. Let the AS curve measure the marginal social cost of inflation on the ordinate, and the AD curve, marginal social benefit of inflation. For AS, inflationary credit expansion causes employment to pick up, as measured on the abscissa. Entrepreneurs invest in hopes of reaping profits. Their *expected* income from the sale of their products determines how much employment they will extend. (It is not necessary and in fact is not the case that their expectations are realized.) However, there are diminishing returns to the increase in hiring achieved through the inflationary stimulus. As inflation is ratcheted up, it takes increasingly more inflation to get an extra worker hired. For AD, with a given capital stock, as previously unemployed workers are hired, the same capital goods are getting scarcer relative to labor. As the proportion of capital to labor diminishes, the returns to society from an extra person working go down. It may even worsen the average welfare (if "society" is taken to consist of only those people who are participating in social cooperation, that is, those who are employed.) Here employment determines the *actual* income in terms of goods consumed and enjoyed to society as a whole. More labor paired with no greater capital results in progressively smaller increases in output.

The equilibrium point, on this view, represents the decision of the central bank (the "Fed") to create so much inflation that the *harm* to

society from an extra dose of inflation is equal or is just outweighed by the *benefit* to society from a marginal worker hired. We can see immediately how equilibrium in this particular sense can coexist with unemployment. For in order to achieve full employment N_{full}, the Fed has to create an unacceptable amount of inflation. At the same time, too little inflation will result in too much unemployment at point N_{u}. The golden mean is the point of "effective demand" N_{e}.

We'll explain later why unemployment and economic instability result precisely from "inflation," i.e., from the bust that is an inevitable consequence of the boom brought about by credit expansion. Inflation does not relieve unemployment; inflation now *causes* unemployment later. Nor is the boom necessary to alleviate some initial mass unemployment. A laissez-faire economy performs optimally, particularly at allocating goods over time, and is superior to a hampered economy. The only pretext for cheap credit is precisely prior interventionism under which the economy grows so slowly due to the government's own interference with business that this same government (spurred perhaps by social unrest) decides to resort to credit expansion in a futile attempt to escort the economy out of the very rut into which it itself has led it.

In other words, wages set, due to union or government violence, above the market-clearing level result in *structural* unemployment. A dose of unanticipated inflation *might* have a (very temporary) coordinating effect. However, inflation takes the form of credit expansion which initiates the boom which later inevitably turns into a slump, causing additional *cyclical* unemployment. As a result, inflation, far from being a (toxic) remedy, just makes the problem worse.

The Phillips curve fails even on its own terms. Goods undergo the market test of the judgment of the consumers. Ideologies undergo the political test of the judgment of the voters. But the Fed's policy is supposed to be "scientific." It is explicitly, as a socialist institution, isolated from the vagaries of consumer interests. The Fed is also nominally independent of politics. How then is it supposed to find the right combination of inflation and unemployment on the level of the nation or world as a whole? Who could possibly instruct the Fed chairman on whether he is right or wrong?

5. That wages must fluctuate, lest capitalism be for naught

Keynes thinks that (1) money wages cannot fall, (2) even if they could fall, that would not help, (3) even if that could help, there is a better way.

(1) Labor as a whole, he writes, cannot reduce its real wage by means of individual laborers negotiating their own personal money

bargains with their employers. We have seen that "labor" can be overpriced either due to general government and union interference with the market or in the slump phase of the business cycle. In the first case money wages indeed "cannot" fall but only because their excessive height is violently enforced. It's not the fault of "laissez faire," in fact laissez faire is precisely the cure. In the second case the boom initiated an unsustainable expansion, and the bust now features a phenomenon of mass business losses and bankruptcies. The losses outnumber the profits, and the boom is revealed to have set into motion a process of economic retrogression. As a result, the social share of the workers is too great compared with the share of the entrepreneurs; the workers are overpaid.

As Keynes would have it, any fall in anyone's wages will harm that person, call him Smith, and will benefit every other worker. A decrease in the money wages of group *X* lowers *X*'s command over consumer goods and benefits ipso facto group *Y* whose money wages have remained intact. Those who "consent to a reduction of money-wages relatively to others, will suffer a *relative* reduction in real wages, which is a sufficient justification for them to resist it" (*GT*: 14). Any change in wages will, according to Keynes, simply redistribute income from one set of workers to another. Even if a worker knows that his wage falling will result in social good such as the proper relationship between wages and prices, it will harm him individually; hence he is not motivated to let it happen. Leijonhufvud (1968) mentions the interpretation of this that workers seek to "keep up with the Joneses" and so rebel against any development that hampers them in the race with their neighbors but considers it "implausible" that this is what Keynes meant (96-7). It doesn't matter anyway. In order for Smith to be working for his employer, call him Brown, two necessary conditions must be satisfied, namely (1) that Smith's working the agreed-upon number of hours per week at the agreed-upon wage outweighs the marginal disutility of labor for him, and (2) that this wage is no higher than Smith's marginal contribution to Brown's production process. If the wage leaves this gap, then Smith will not work for Brown for long. If (1) is violated, then Smith will switch to another line of work where the distance between the benefits and costs of working is positive for him, or at the very least cut the number of hours waited on Brown's business; and if (2) is violated, then either his wage or again hours worked or both will have to be reduced. Now businesses are always started and wound down; they expand and contract; they discontinue old products and begin making new ones; thus, entrepreneurs continuously churn the market which results in constant updates to Smith's and everyone else's discounted marginal value product. It may so happen that Smith is presented with a choice to keep working at a lower wage or be unemployed. Therefore, Smith cannot "resist" adapting to a changing

environment; if he refuses a pay cut, then he will soon be entirely without income. There are after all *two* parties to any labor contract, and the worker cannot always get what he wants. No worker in general can resist a wage reduction when his unemployed brethren agree to work for lower wages, any more than an entrepreneur can resist price reductions when his competitors cut their own prices.

Whenever profits come to exceed losses by more than before, there is a decline in money wages, though profits do indicate that consumers are being served. Here temporarily lower nominal wages end up bringing about permanently higher real wages, and workers would be harming themselves if they threw a monkey wrench into the market process. A later economy will differ from the earlier economy in terms of who is receiving what money income, but this reshuffling of cash is hardly the only significant event, since the *overall* consumer happiness, standard of living, and real income in one economy will also be different from those in the other one. The free market is not zero-sum, that wages can fluctuate has a social purpose, hence society has a reason to allow this.

(2) Keynes' worry is that even if some Smith is accepting a lower wage, then overall employment will not increase. Alvin Hansen (1953) explains Keynes' rejection of the sufficiency of wage adjustments as follows: "Thus if money wage rates (under the pressure of ruthless competition in the labor market) fall all round, the money-demand function for goods (and therefore the demand function for labor) will also fall." (23) As Rothbard and Hazlitt point out, Keynes confuses the *hourly wage* of an individual worker with *total payroll* or total income to all workers. There is no need for the latter to decline when the former falls if as a result employment increases. And even if both decline, what matters is the proper (equilibrium) relation between the various wages and prices, and if it should be achieved, whatever the level of either is, full employment will follow. The correct *absolute* wage-price level depends on *MV* and can, in the presence of excess demand for money, be reached by means of proper deflation; once this level is attained, it need not change any further.[5] It's the *relative* mispricing that causes unemployment and can be corrected by lower wages. Lower wages for workers in, say, the textile industry which before was coercively restrained will cause the industry to expand somewhat and bring about lower prices, too. If the demand for the goods of this industry is elastic, then employment *there* will increase significantly. If it is inelastic, then after buying the goods the consumers will have more money in their pockets. They will use this money to buy goods produced elsewhere in the economy, thereby increasing demand for them. This will cause *all other* industries to expand and hire more workers, relieving unemployment further.

The reason why a considerable number of money wages need to fall at the same time may be to help society overcome a recession. But the whole awfulness of a recession is that there are no entrepreneurs to bargain with in the first place, they all have collapsed, from small speculative ventures to the erstwhile high and mighty financial giants. The economy has imploded, and with it attempts to produce and aggregate real wages. The fantastic illusions of the boom are over; material goods and human capital that were overvalued and vigorously competed for in the boom part of the business cycle are now plentiful, with worker competition high, and business competition low. Is there any doubt that smaller compensations will help the economy?[6]

Then there is the income effect on the supply of labor. At $40 / hour Smith might want to work 40 hours per week, and at $80 / hour he might be willing to be burdened with only 30 hours per week. The reason is that the 40th hour in the first case will supply $40 worth of goods but at a lower overall income (namely, $1,600 / week), such that the desires satisfied by the extra $40 are relatively high on Smith's value scales and higher than the utility of spending the marginal hour on leisure. In the second case, the 31st hour will supply $80 worth of goods, but the set of desires this amount will satisfy is relatively lower on the value scales because the first 30 hours have already yielded income ($2,400 / week) that has served to make Smith quite happy. This amount may be prized less than the utility to Smith of consuming the 31st hour on leisure. It is true that lower wages may induce some people to work less, as per the substitution (of work for leisure) effect on the supply of labor. At the same time the workers who were in hindsight overpaid during a boom may in a recession choose to work longer hours for more modest wages. The income effect may here dominate the substitution effect leading to higher employment overall.

In short, lower wages are essential for economic recovery, even if the recession itself was viciously caused by the government and central bank's fiat money inflation and by credit expansion embarked on by commercial banks.

(3) The only situation when *all* wages may need to be brought down is during a secondary deflation after a bust. The fractional-reserve banking system is inherently unstable. Credit contraction and bank failures can cause continuous reduction in the money supply, producing persistent crippling PL disequilibrium and therefore global mispricing and additional unemployment. To the extent that equilibrating it by price adjustments is costly and time-consuming, a case can indeed be made for an intervention of the central bank.

6. That labor is heterogeneous

In constructing his "theory of employment," Keynes proposes "to make use of only two fundamental units of quantity, namely, quantities of money-value and quantities of employment" (*GT*: 41). He takes the skill and number of laborers "as given" and is interested in the "volume of employment" (*GT*: 245). Now if labor were perfectly nonspecific, that is, if every worker were equally competent at every job, and under some other idealizing assumptions, there would be a single wage rate for the entire economy determined by the supply of and demand for "labor." If, in addition, this wage was coercively set above equilibrium level, there would be unemployment, and I suppose inflation, also idealized, might be some kind of cure for it. But the antecedent is false, workers are unequal, so what is Keynes up to here?

We may distinguish between (1) production by an entrepreneur, (2) an act of working by an employee, and (3) labor as a factor of production. The four Aristotelian causes can be identified for each. Each such cause sustains a thing, call it *X*, in existence right now, and it supplies information about *X*. Take even a single cause away, and *X* corrupts. The material cause answers the question "What is *X* made of?"; the efficient cause, "How does *X* work?"; the final cause, "What is *X*'s purpose? What is it for?"; and the formal cause, "What is *X*?"

The essence of production is obtaining capital goods and carrying them down the structure of production toward a more completed item sold by the firm. The factors of production and the technologies employed are the material causes of (1). Entrepreneurial direction of the firm via management of factors and use of the methods of production is its efficient cause. And the final cause is the output and profits to the entrepreneur from selling this output on the market.

With respect to (2), the matter of doing work is made up of three things. One, the amount of energy, whether physical or mental, that the worker expends while making the product and the disutility and fatigue associated with that expenditure. Two, the skills necessary to handle the raw materials and to operate the tools and machines being used in production. Three, the time it takes to complete the project. (It is true that time is a factor of production in its own right, but it is labor that takes time, which is why I am including it in this list. The answer to the question "How long will it take you to complete this project?" may be counted as part of the material cause of labor.) The act of working combines numerous energies, skills, and time periods. The formal cause of labor is determined by the answer to the question "What are you doing?" or "What are you working on?" If one is putting together a presentation, then doing that is the essence of his work right now.

As for (3), the labor factor is materially composed of the steps toward completion of the work and formally may be called intelligent use of one's powers and arts.

The final cause of both (2) and (3) is output and wages. And human self-control and self-motion yield the efficient cause.

In (3), labor is distinct from capital, whether original or produced, human or real. Labor is a directing and creative agency. But in (2), labor and capital are complementary, and there is no disentangling them. Labor cannot be discussed in isolation from actual tasks of varying complexity to be performed. Labor and capital are separate for the economist but always found together for the entrepreneur. As we will see, Keynes confused these two points.

The energy expended and even the feelings of tiredness from work can perhaps be added and subtracted; that part of labor's matter is indeed somewhat homogeneous. But not skills and arts or labor as a whole. What, for example, is five hours spent programming a computer plus three hours spent laying bricks? To get around this primordial difficulty, Keynes resorts to an ingenious maneuver. A good worker using a bad machine, he says in effect, may well produce as much as a bad worker who uses a good machine. So, for any two workers, their differences in skill can be reinterpreted as the differences in the equipment they use. The situation of any two workers with different skills who use the same equipment is *as if* they had the *same* skills but used different equipment, one more, the other less productive. Thus, differences in skills can be reduced to differences in tools. But tools, capital are already heterogeneous. We lose nothing, then, by making them "even more" heterogeneous and by ignoring differences in labor skills. In addition, if I may continue Keynes' thoughts, powerful machines cut down on the time needed to create the product. A perfect machine might do its work instantaneously. So, time too is reducible to differences between capital goods. (*GT*: 41-4)

This trick is wanting. First, for numerous skills, there are no actual machines that can replace the skill. It might as well be an economic law that demand for skilled workers in a wide variety of occupations will never cease to exist.

Second, even and especially if there are such machines, labor becomes merely an expense of human energy simpliciter; there is no indication, when we use mathematics on homogeneous units of labor, as to *how* this labor is used. Keynes' stratagem causes there to be no definition of "ordinary labor," into which "special labor" is supposed to be converted. For it makes little sense to define a unit of labor as any expenditure of life energy equal to, say, 10 calories. Even if it could be so defined, a machine could always be constructed that performed the same function by expending even less energy. Both aspects of labor are thereby eliminated, and this is a reductio of Keynes' argument.

In other words, the money-wage of a labor-unit depends crucially on the expected revenues from the product being built. Not all labor-

units are created equal. But the value of the factors of production is imputed to or arises from the value of the consumer goods they cooperate in producing. The higher the worker's DMVP, the more he can be paid. Focusing solely on how "hard" one works in terms of calories expended abolishes labor as a factor of production. In matter of fact, no one cares how hard a worker one is; employers reasonably demand results, and results are unique to each human resource. If labor is not evaluated on these merits, i.e., its contribution to society, then it is of no consequence to economics. Moreover, the calories expended are a *cost* to the laborer. He would do well to minimize them, and an ideal worker would lose no energy during the act of producing at all. The entire matter of labor again vanishes entirely, leaving nothing to help the economist.

Third, one difference between labor and capital is that capital is owned by the entrepreneur, whereas workers are self-owners and owners of their "human capital"; they rent out their skills. Workers then receive rents on their human capital. If slavery is not tolerated, then labor cannot be divorced from capital. It seems that Keynes' attempt to make labor calculationally tractable fails.

If Keynes abandons his artifice, then he can try to define ordinary labor as operation of any kind of equipment or the worker's body valued at \$1 / hour. Then 1 hour of special labor earning \$20 / hour would be equal to 20 units of ordinary labor. I must protest that first of all, one cannot draw his curves of aggregate supply of and demand for labor without observing the actual market and prices for various kinds of labor. Only the market can inform the economist that one hour of labor of kind X costs as much as N hours of labor of kind Y or rather did cost in the immediate past, a datum of economic history. But the market relations are always changing, and so does the relationship of the "labor-unit" to special labor. Both of the above must adjust with time, the purchasing power of money varies as well, and it is hardly "scientific" for a unit to be subject to such change. If the measuring stick is always changing, then what can we possibly affirm of the things measured?

Second, this attempt falls prey to the objection Keynes himself raises, namely, that it is not in general true that special labor can actually be replaced simply with ordinary labor working for a longer period of time. To see why this is so, it is enough to treat workers' skills as their human capital (the next chapter traces the implications of this idea). But Keynes does not deny the heterogeneity of capital, though he makes little use of this crucial fact in his writings. A robot on a car assembly line cannot at all be replaced with an automatic hammer that drives nails into things just working longer than the robot. Neither can Smith's salesmanship skills which garner him \$40 / hour be substituted

with Jones' powers which consist in his being able to swing a chainsaw (even if generally competently) for $10 / hour only spending 4 times as much time doing his thing. Aggregating the demand for and supply of labor in this fashion is worse than useless. Human capital is a form of intellectual property with its own peculiar attributes. It depreciates by *not* being used (indeed it gets better with use) and by being made obsolete as an outcome of economic progress; it is scarce and commands a definite premium on the market because (1) people can learn it unequally well, and (2) this learning is not costless; it is what makes each human being economically one of its kind; etc.

Dillard (1948) ascribes the following motive to Keynes for using the "wage-unit": "because changes in output are measured by changes in the amount of employment" (73). To be sure, quantity of employment has an effect on the output. But by far the most crucial determinant of output is rather *quality* of employment, or the states of technology, capital accumulation, and the extent to which the government allows entrepreneurial competition. The values of the sheer number of workers and hours they work do not "measure" output. Keynes attempts to surmount this problem by focusing on the very short run during which capital, both real and human, is fixed.

Keynes claims to be able to explain "poverty in the midst of plenty" (*GT*: 30). I imagine that he is referring to the poverty of the Great Depression coupled with the abundance of capital goods accumulated. Our author defines full employment as occurring when a person works as much as he would like at the given wage. (For example, let Smith be paid $50 / hour. He would allocate his 5th hour to leisure if offered only $25. As such, at 5 hours per day, he is not fully employed. 6th hour's leisure is worth $30; …; 8th hour's, $45; 9th hour's, $60. Smith is fully employed, according to Keynes, if he works 8 hours.) In a poor community, "a very modest measure of investment will be sufficient to provide full employment" (*GT*: 31). There are several ways to interpret this. First is to question whether Keynes is making sense altogether: is not poverty *defined* as low overall investment? It is the epitome of a poor community that there are few consumer goods being enjoyed and capital goods aiding production. Keynes' argument then is reduced to "employment is promoted by poverty," a grotesque transvaluation of economic values if there ever was one.

Second, that insofar as, "worse still," propensity to consume is weaker and investment opportunities less attractive in a wealthy community, Keynes is again talking about hoarding, since consumption, investment, and hoarding exhaust all possibilities of using money. As we will see, this too is a nonissue. Empirically, a community's greater wealth tends to lower any propensity to hoard.

Third, Keynes' reasoning may be that a poor man reckons that his

real wage is very low, hence why bother working for such a pittance? This is one of the many paradoxes in *General Theory*: is it not obvious that a poor man has a far greater incentive to work than a rich man does? Of course, the solution lies in the fact that in a rich community, labor is more productive than in a poor one. By working a poor man satisfies desires that are very urgent but only a few such desires. On the other hand, by working an extra hour a rich man satisfies his less urgent desires but many more of them. (If Smith is poor, then his very urgent ends thus attained rank higher than *any* of the Smith's rich doppelganger's less urgent ends, but they need not rank higher than *all* of such ends put together.) These two factors balance each other out such that full employment in Keynes' sense is attainable in both a rich and poor society.

It is not true that as society grows richer, making profits becomes more difficult or the marginal efficiency of capital declines or the "inducement to invest" grows weaker. There is no such thing as "exhaustion of investment opportunities" with capital accumulation. Successful entrepreneurship that rearranges production is compatible with any level of economic development.

For example, Dillard (1948) proposes that "the very fact that a community is rich in accumulated capital assets weakens the inducement to invest, because every new investment must compete with an already large supply of old investments" (55). Surely that is not the case if the prices of the consumer goods made with the aid of these old capital assets are so low due to high material abundance, low time preferences, and stable money supply that there is plenty of money in the consumers' hands left over to buy the fruits of new investments. Is Dillard really suggesting that the sheer number of even rotators can intimidate a new entrepreneur? On the contrary, for an enterprising individual, all those people are pushovers, ripe for the plucking. It doesn't matter for employment what the ratio of consumption to gross investment is.

Keynes argues that "the greater… the consumption for which we have provided in advance, the more difficult it is to find something further to provide for in advance, and the greater our dependence on present consumption as a source of demand" (*GT*: 105). He sympathizes with the following argument: "What will you do… when you have built all the houses and roads and town halls and electric grids and water supplies and so forth which the stationary population of the future can be expected to require?" when applied to both public and private investment. (*GT*: 106) Keynes displays a puzzling lack of imagination: surely, the economic progress between the time *General Theory* was published and now has been enormous. His assumption that the economy of his day had become stagnant and "mature" was false.

Improvement is not about to end any time soon. Similarly, a depression will allegedly end after sufficient depreciation and obsolescence of existing durable capital because it will then become profitable to replace these goods. But there is no difference in potential profitability of reproducing existing vs. creating new capital at any time. There are always both opportunities for profit and the men ready to seize them. Even if technical progress stopped and all the known techniques were in use, it remains that people save for the explicit purpose of investing. If there is nothing new to invest in, there would be no new saving. All saving would merely maintain the existing production structure, and there could be no gap between saving and investment. We'd have something resembling an evenly rotating economy and no business cycle and no unemployment.

Keynes cares about the "quantity of money-value" because of his belief in inflation as a panacea for macroeconomic distortions which can raise the "quantity of employment." He does not realize that all things are good by virtue of their form, and labor is no exception. Thus, an economic boom imbues *existing* capital goods including human capital with high illusory worth (for no time to create *new* capital is provided for) and devalues and cheapens them in the recession, causing them to be salable only below costs and throwing people out of the work for which they may have spent years training and preparing. The answer to "What are you working on?" becomes "Something I will not succeed at." Inflation cannot ameliorate this judgment of the market.

The challenge to the economy regarding labor resides in the dual problem of (1) creating, updating, and transferring human capital and (2) matching human skills with their complementary physical capital. Quantity of employment and how backbreaking labor is for people measure precisely *scarcity* of capital, both physical and human, relative to labor. Long working hours and monotonous and "hard" work are indicative of a rude economy.

By casting his gaze at the "volume of employment" as a whole, Keynes forgets that what one does for a living is an intensely personal choice, almost as intimate as the choice of a spouse, depending on the wage, the inborn talents, the joy or on the contrary tedium of labor, the length of the commute to work, the state of national prosperity, and a hundred other factors. The variable "man-hours worked" conceals all these distinctions.

In addition, quantity of employment is of no interest without additional data about *productiveness* of employment, in particular without knowing the refinement and variety of useful skills and human capital that the workers possess. Unfortunately, Keynesians have rarely shown interest in matters as prosaic as consumer happiness obtained *via* human labor. It is as if they have given up at making the economy

efficient and resolved at least not to permit the suffering attendant on the Great Depression-style mass unemployment. We will be poor, they reason, but at least no one will be an economic pariah. In the course of this book, we will see that this program fails on its own terms; the similarities between Keynesianism and socialism in which "they pretend to pay us, and we pretend to work" will be put in stark relief; and I will argue that despair about general prosperity need not in any way be counseled.

7. That what suffers unemployment is human capital

Labor is the most nonspecific factor of production; any person can work in a variety of occupations. But most kinds of labor require skills that cannot be acquired easily in a day or two. These skills, hands-on experiences, knowledge of the tricks of the trade, attitude toward work, and work-related virtues such as punctuality are collectively called "human capital." Human capital is workers' investments into achieving competence in some field. Therefore, since a laborer can easily move from one line of work into another and so need never be unemployed, what *can* be unemployed is his present human capital.

Inasmuch as this capital is composed of original factors, it is materially the same as real capital. These factors are: a natural resource or the worker's mind and body; labor, because acquiring a skill takes effort and has disutility; and time, because few skills can be learned overnight. Human capital arises out of self-making or transformation of the self into the kind of person who will be useful for satisfying the desires of other people in their capacity as consumers – for a price. Becoming a professional means integrating oneself into social cooperation.

We can distinguish between four types of human capital, each in the sequence scarcer than the previous one: (1) *general abilities* or valuable qualities shared in varying degrees by most workers, such as physical health, literacy, or ability to drive a car, i.e., a kind of common endowment of a nation's labor force; (2) *transferable assets* or qualities of an individual worker that help him to succeed in most occupations, such as intelligence, conscientiousness, communication skills, and the like; (3) *specialized skills* or technical knowledge of and proficiency with methods of production within a particular firm or industry; and (4) *unique powers*, such as inventiveness, inimitable artistic genius, or aptitude for coming up with solutions and moves yet unimagined by competitors. Human capital (1)-(3) may well be *as* important as real capital, the fourth kind of human capital is preeminently crucial. It is the most scarce and precious of all commodities.

I hasten to add regarding (3) that real capital is the source of human capital. For example, an argument came up in a conversation that Labor Day "celebrates the productivity of American workers." I replied that this is no accomplishment of the *present* workers who are so productive only because they have access to capital goods that workers of other countries lack. Education and human capital matter but only derivatively because most useful training occurs on the job, precisely while using those capital goods in apprenticeship mode, so to speak, to acquire the skills of working with them competently. Since those capital goods – tools and machines – are provided to the workers not by the workers themselves but by capitalists and entrepreneurs, it would perhaps be more appropriate to celebrate "Capital Day" instead.

Understanding this reduces labor-based macroeconomics into a kind of capital-based macroeconomics. It shows notions like "full employment" in its traditional sense to be barely meaningful because employment cannot reasonably be measured in man-hours but only in (a) the human capital in use and (b) creative entrepreneurship of workers to keep their skills up to date or learn new skills in order to pursue careers in greener pastures. A robot cannot pick up new skills (at least not yet) which is why human beings are so protean and why human labor is highly malleable and can in time be applied to numerous fields. But the skills themselves are much more particular and must be cared for by the workers, lest they become obsolete and worthless.

Note that inequality of workers is an impetus toward further progress. Consider the strange notion of "planned obsolescence." The idea is to deliberately shorten the useful life of one's product so that the consumers will be "forced" to buy replacements more frequently. This understanding is absurd both on the consumer level and on the producer level. First, there is an effect on consumer well-being: when choosing a light bulb, one will usually prefer a more durable item to a less durable one at the same price. Even if their prices are proportionate, one is likely to buy a longer-lasting bulb in order to economize on storage and replacement. Even in industries with strong quality competition there is no obsolescence because consumers voluntarily, without being "forced," replace products for reasons other than their wearing out. By investing less into durability, companies are simply responding to consumer demand with no objectionable hanky-panky whatsoever. Second, producing 5 light bulbs that last 1 year each is almost certainly going to be more expensive than producing 1 bulb that lasts 5 years. The benefit to the consumer is at least as high in the second case as in the first, and the costs to the producer are smaller. Durability therefore is selected for on both sides of the supply and demand equation. Somewhat analogously, there is a clear incentive to any worker to become more efficient as this brings the possibility of a higher wage. On the other

hand, a businessman is not indifferent between hiring one man who produces 80 widgets per day and hiring 8 men each of whom produces 10 widgets, even if the total labor costs are the same. First, the businessman economizes on management (one man is easier to direct than eight) and transaction costs of finding labor. Second, each worker utilizes capital goods, and machines and equipment both are occupied less (and so are available for other projects) and depreciate more slowly in the first case than in the second. Increasing one's personal efficiency pays for both the employer and the employee.

Let's delve into this subject a little deeper. Employment is simply a contract to exchange labor for money. But what is *full* employment? Can we say that a man is fully employed if he is exhausting himself chopping firewood 16 hours per day every day, in which case he physically could not work still more even if his boss wanted him to? Surely not. A simple definition of full employment is that level of work at which the worker's wage is equal to his DMVP or to his disutility of labor. It means that *either* even if the worker would like to work more, no more work can be offered by the employer, *or* even if more work is available, the worker prefers to enjoy his leisure.

The state of full employment has no meaning without reference to the wage agreed upon by the entrepreneur and worker and the actual state of the market. If company *X* employs Smith 40 hours per week at $20 / hour, such that *X* is not willing to employ Smith more, yet Smith does want to work more, then Smith can try to find work with another company *Y*. However, the best job he can find given his skills will pay only $10 / hour. At this wage Smith is not willing to work more at all. We conclude that Smith is fully employed. The same analysis can be reversed. At $20 / hour Smith is willing to work no more than 40 hours per week. *X* wants him to work 10 extra hours per week overtime, but Smith would agree to do so only at $30 / hour. But at this wage it is unprofitable for *X* to employ Smith. Again Smith is fully employed. One way to make employment fuller then is (1) to lower one's wage demands if one's human capital has become less valuable. There are two other ways: (2) when changing market conditions imbue one's current skills with greater value (such as when a different company lures him with a promise of higher pay); (3) when he purposefully invests into learning new skills for which he can get more money.

To flesh out the issue, a man expends labor in *acquiring* his human capital, and having acquired it, he then expends labor on his job *using* the capital accumulated. A careful reader will notice a regress: in order to build human capital, a man must use labor on some previous possessions. The regress is not infinite because the remotest original factors here are human natural powers in the self both to make and to be made. One mixes his labor with original factors to train himself; then

one mixes more labor with these produced factors to create consumer goods. However, in continuing to desire the future income from the skills invested in, the worker remains an acting man. In this sense, full employment is illusory, just as the state of equilibrium is also a mirage. Workers who know what they are doing constantly seek new skills so as to remain competitive under changing market conditions; they are perpetually in the rat race, adapting and improving. They do not necessarily stay long with the same employer but jump from one gig to the next, going to where they are most needed. They usually build on their existing skill set, but if they perceive that the market is making them an offer they cannot refuse, they are always prepared to start at the beginning, teaching themselves brand new arts. Since, again, learning takes time, and life is essentially surprising, entrepreneurial errors are possible. The business cycle, for example, can deceive workers into learning skills the demand for which cannot be sustained for long.

As entrepreneurs react to changes in consumer demand and act themselves to introduce creative advance into society, they alter the data used by workers to decide on careers or occupations. Human capital is as heart- and mind-dependent as real capital, and the derived demand for skills is always changing. Full employment cannot be taken to mean just that "everyone works as much as he wants" because economic progress (1) continues to make employment ever fuller, as in better and more productive, and (2) harms the short-run interests of those workers the demand for whose skills falls.

The paradigm of a worker-capitalist-entrepreneur is an independent consultant who offers to his customers "solutions to their problems." He seeks to make his clients more efficient, reduce their costs, and raise their revenues. He is paid for results not for faithfulness. Since the economy and technologies are perpetually in flux, and both problems and the most efficient solutions to those problems change all the time, the consultant keeps himself abreast of all the new developments in his field. For example, entrepreneurs and consultants who drive and lead the market do not merely implement "best practices" found within their occupations or adhere to "industry standards." They discover new and better practices than the ones presently conceived by most market players, exceed the standards, and through those outdo their competition.

In (a) building himself up, a consultant like this is a worker because he suffers disutility of *labor* during training; he is a capitalist insofar as he invests time and money into acquisition of skills (having found himself "with himself" as a natural resource), bearing disutility of *waiting*; and he is an entrepreneur because he directs his own studies, makes use of present resources, and reaps (uncertain) future gains, taking up unto himself the disutility of *fear*. Likewise, in (b) using his

new abilities, the consultant is a worker because he receives present goods for his services and endures toil and trouble; he is a capitalist because he has accumulated (produced) human capital in conjunction with (original) inventiveness and creativity; and he persists in being an entrepreneur as long as he finds his own clients. Note that a consultant often promises to deliver a project even if he does not know how to solve all the problems involved. He hopes to figure them out as he goes along. In this case, we might say that he *has* human capital but *is* his ingenuity. A worker, however "independent," is still a servant. Even a business owner is directed by the consumers, and even the lowliest peon has to figure out the most efficient way of doing the task assigned to him and make use of his special expertise. Just as patients are urged to take control over their health and treatment, so workers ought, if they know what's good for them, to take charge of their own advancement.

It may well be that human capital is specific to a particular line of business, with the human and real capital tightly bound to each other. Smith is getting $50k / year at company *X*; if he were to leave, then he could only get $25k elsewhere; at the same time the company would lose $100k worth of revenue. It does not pay Smith to leave, and it does not pay *X* to fire him. Smith's wage will be determined by bargaining within the (25k, 100k) segment.

Another definition of full employment is that state of affairs in which "everyone who wants to work can find work." This, however, is manifestly unhelpful because the natural question is, "You want to work as *what*?" Practically anybody can chop firewood, say. Perhaps one is an architect, and the market for architects has been saturated at the going price. Now of course one can get a job even there if one is *better* than other architects or agrees to work *at lower pay*. But the point is stinging: capital does not "beget" profit, even worker profit.

These distinctions suggest that thinking about labor in the aggregate is outrageously sloppy. I would therefore go so far as to drop the notion of full employment from economics altogether and recast it in moral or politico-philosophical terms, to wit that each person ought to seek to make himself maximally useful to society and for that usefulness be compensated by society accordingly. The government's role here is entirely negative: it can try to prevent malinvestments in human capital and make it easier to switch careers, such as, as already mentioned, by abolishing the business cycle, abstaining from subsidizing college education which rarely confers any useful skills, ending occupational licensing and restrictions, easing immigration controls, and so on.

The notion of full employment of *physical* capital is similarly preposterous, for two reasons. First, by transferring a good from a less valuable use to a more valuable one, one makes that good's employment "fuller." Second, there may be unowned resources of which an

entrepreneur might want to take possession. Even sand in the Sahara Desert might in the future turn out to be useful for something important, becoming an inexhaustible source of new capital. The analogy to human capital is plain: a worker can always be reallocated to his own and society's benefit, and the demand for brand-new kinds of skills can be elicited by technological progress. Full employment of *anything*, in fact, is an illusion that one foists upon himself due to lack of alertness, to use a preferred term of Israel Kirzner, to profitable opportunities.

For an example of vicious thinking regarding full employment, I direct your attention to H.R. 2847, "Hiring Incentives to Restore Employment (HIRE) Act" passed by the U.S. Congress on March 18th, 2010. Among other things, the bill establishes a payroll tax holiday for employers who hire "qualifying workers" – individuals who have not worked more than 40 hours during the last 60 days. It is a bill like any other in the sense that the government considers the people to be trained monkeys who dance to the regulators' both clumsy and highly intricate behavior modification tune of financial incentives and disincentives. It legislates a tax cut, in that the employers are freed from the necessity to pay their portion of Social Security for a period of time for those people they hire who have not worked for a while. In preparing this bill, Congress was animated by a faulty view of full employment. As far as the government is concerned, employment is full when everyone is busy doing something, anything. It does not matter whether a worker is being productive or not, whether the company he is working for is making a profit or not, or whether the company is serving the consumers or building bridges to nowhere. There is no realization that even if one hires a person who was previously employed by someone else, employment still increases if not in *quantity* then on average certainly in *quality*. There is no reason whatsoever to prefer one to the other.

From the foregoing we can deduce the absurdity of the moniker "involuntarily unemployed" for people who lost their jobs and are actively looking for new ones. Keith Joseph, a British MP, when told during the United Kingdom's dark days of Fabian socialism that the government-run steel industry that was losing money was so inefficient that it could not be sold, replied famously, "I hereby bid one pound for British Steel." Similarly, an allegedly involuntarily unemployed person can always be told by any company: "I hereby offer you, Smith, $1 / hour if you work for me." What has happened, in other words, is that the worker's human capital has been wrecked by changing market data to such an extent that it now commands a very low price. This means that Smith can still secure a job provided that he sets his ambitions low enough. The reason why he is not taking that opportunity is that he hopes that his old skills are still useful to someone, and it is bad

manners to get a job and leave a week later for the sake of another one. In so doing he remains an entrepreneur who deals with risk and surprises and thereby faces an uncertain future. Or it could be a vacuous case of full employment: Smith's reservation wage is higher than $1 / hour, i.e., at that wage Smith voluntarily prefers to work zero hours. Since job search takes time, Smith is forgoing a sure but low-paying job now for an unsure possibility of a better job in the near future. This seems to be a most *voluntary* choice and therefore a case of mere frictional unemployment.

Peter Skott (1989) argues that "the economic system needs unemployment as a means of disciplining workers." We'd better believe it does, just as it needs losses as a means of disciplining entrepreneurs, high interest rates as a means of disciplining people with bad credit history, and in general the possibility of unhappy failure as a means of encouraging attempts to succeed. The "institution" of failure consists of two parts: first, threat of it which injects prudence, sound judgment, responsibility, and care into human decision-making and actions; second, smooth and swift liquidation and recovery upon actual failure to redeploy resources to their more highly valued uses. "But this need does not make unemployment voluntary unless the legitimacy of capitalist relations of production is taken for granted," Skott goes on. (157) There is no reason to take it for granted since socialism can be proven impossible.

8. That saving redirects production to novel capital goods

To get a handle on saving, we will consider three scenarios. The first involves Robinson Crusoe alone on his island. Suppose that Crusoe wants to make a boat. However, at present he cannot devote all of his efforts to this task, as a more urgent need, namely, to feed himself, is pressing on him. What he can do to solve this problem is catch more fish than is necessary to assuage his hunger and save some of them. The work can proceed in two ways. Every day Crusoe can dry a few fish and eventually stockpile enough of this consumer good to sustain him through the project. Then he abandons fishing altogether for the duration of the time necessary to build the boat. In this case there are two time periods that must elapse before a future good is produced: the time it takes to save, and the time it takes for the good to mature or be created with the help of the savings. Crusoe may decide to consume so few fish that he goes to sleep still hungry, all in order to shorten the time he has to wait before starting work. Alternatively, Crusoe can split each day between fishing and working on the boat. Regardless of how he chooses to proceed, he is sacrificing present consumption or utility,

whether of fish or of leisure.

Schumpeter (2008) puts it this way: for Crusoe "the function of his saving is to raise him above the necessity of submitting to daily drudgery for the sake of his daily bread and to give him breathing space in order to look around, to develop his plans, and to secure cooperation" (16). This is almost right. Crusoe had better formulate his plans *before* he begins saving (and an entrepreneur in a real economy, *before* he takes out a loan and subjects himself to interest expenses); otherwise, if no opportunities can be detected, then Crusoe will find his efforts wasted. The way to salvage Schumpeter's proposition is to call the savings a "hoard" while they are being accumulated and an "investment" after some kind of plan is worked out. Hoarded money is insurance, to be spent for an undetermined purpose at an undetermined time. When these potentialities harden into something real, the money may well be invested.

Let's emphasize the following proposition: (1) when Crusoe saves, he saves actual consumer (or capital) goods which have full use-value for him. By the time he is ready to invest, he has accumulated real wealth.

The second scenario is direct exchange between Crusoe and Friday. Both men specialize and produce both for themselves and each other. Suppose that they exchange fish for berries. Here a part of Crusoe's supply of fish has no use-value but only exchange-value. (2) He accumulates wealth, but it is no longer wealth that he can himself exploit. Suppose that Friday has been consuming Crusoe's fish for a year in exchange for his prize pig. Crusoe had demanded that Friday fatten up the pig during all that time. What happens if, when the time comes to part with the pig, Friday refuses to let go of it? To be sure, that is fraud on his part. But it also means that social cooperation has broken down and may easily harm Friday in the long run. The benefits of division of labor are not exhausted with a single exchange which means that it may be in Friday's interest to pay up. Crusoe and Friday benefit from continuous association despite the fact that their actions must now be coordinated, inasmuch as they take one another into account in their plans.

The third scenario is a modern economy with indirect exchange. Here the difference between Crusoe economics and real economics becomes evident. (3) For Crusoe saves *wealth*, while Smith, if he saves, saves *money*. But money is not wealth, it does not represent wealth, etc. What is going on?

It seems at first glance that we might argue as follows. There is in the first place a symmetry between Crusoe and Smith in their capacity as savers. They sacrifice first and benefit later. It looks, however, as though by the time enough savings have been accumulated, Crusoe has

his fish, while no new goods seem to be present in the monetary economy: they have all been consumed! It is true that the matter partially comes down to justice: Smith has so far sacrificed and allowed other people to benefit from his frugality, so now Smith "deserves" to reap the benefits of his prudence by purchasing some expensive item with the cash he has amassed. In this process other people are "hurt" because he takes something valuable off the market, but they were compensated for that in the past. Saving in an economy with indirect exchange may then be construed as a property rights issue. It effects redistribution of wealth that non-savers enjoy from the future into the present, for as long as saving is going on. Smith's accumulation of a cash balance results in more goods per consumer that might otherwise have gone to Smith until the savings are spent. This means that the prices of those goods are lower than they would have been if he had decided instead to stop saving and spend and compete for those goods on the market thereby bidding up their prices. Supply is high (because Smith keeps producing), while demand is low (because he is not spending the money he earns), resulting in lower prices. The more is saved, the lower the velocity of circulation of money, resulting in perpetually lower prices.

This reasoning is sound if the savings are simply hoarded. Keynes writes that when there is saving, there is "a transference of consumption *from* the savers to the general body of *consumers*, and a transference of wealth *to* the savers from the general body of *producers*, both total consumption and total wealth remaining unchanged." He obviously means that *goods* are transferred to consumers, and *money* is transferred to savers. "There is no increase of wealth in any shape or form corresponding to the increase in saving; – the saving has resulted in nothing whatever except a change and change-about between those who consume and between those who own titles to wealth." (*TM*: Vol 1, 174) Hoarding creates real wealth insofar as it fulfills people's desire for financial security which is a consumer good. At the very least it does not decrease real wealth.[7] There is nothing antisocial about demand for money.

If the savings are earmarked for a particular purpose and slated to be spent on a specific date, then the economic problem I have posed is only apparent. Suppose that instead of waiting for a year to save the $50,000 necessary to start a business, every week Smith takes $1,000, buys some capital good that he knows he will need, and puts it in a futuristic stasis field where it does not spoil. Then, by the end of the year, Smith will have real wealth stored up. If, on the other hand, Smith saves $50,000 directly and only upon having saved that much spends it during a single shopping spree, then it was the *task of other entrepreneurs* to foresee that the goods he now wants shall be available in the

economy at prices he finds acceptable. While Smith is saving, those other entrepreneurs are stockpiling goods in anticipation of increased demand on his part on some particular future date. They stand ready to deliver these goods (e.g., capital goods) when his saving is finished and he is all set, say, to go into business, buy factors of production, and all the rest. Smith indeed is accumulating only money, but goods are created anyway, though not by him but by other people. Those entrepreneurs have expended their labor and time in order to prepare these goods for Smith to buy. That is, just as they have used Smith so far, he now uses them and in fact has been using them for a while (because the period of production of any good is nonzero), though as per the essence of indirect exchange, the acts of selling and buying are separated in time.

People participate in indirect exchange, even though they exchange real wealth for money, because it is in their interest to be integrated into a large economy; failure to do so means retreating to autarkic production which for most people would be suicide. As a result, in this case consumers receive no benefit from Smith's abstention from consumption even while he is saving because resources are still diverted from production of present goods to production of future goods. An act of capitalist saving redirects production from the consumer goods that Smith would normally enjoy to capital goods that Smith believes will make him more productive and garner him profits.

It may be objected that this ascribes too much power to entrepreneurs. Can they really read a person's mind and predict what he will want? In the first place, consumers select only among those goods and services that the batch of all entrepreneurs together have offered to them. Some of the latter have to get lucky. Second, the collective state of the minds of the consumers is expressed in the momentary state of the market. Before Smith started saving there already had existed a determinate range of his choices. He has some idea of what he wants, though he is open to still better offers. Third, in order to attract Smith's attention to one such offer while his bank account is growing, any entrepreneur contemplating satisfying his desires needs only to come up with an original marginal improvement to the present state of affairs. Competition keeps every entrepreneur on his toes, such that it will not work for him to produce junk and expect the consumers to buy it because anything is better than money with no use-value. There will normally be a great range of choices.

There is the period of saving and period of production. By saving fish Crusoe buys himself time, his own labor, and, say, the trees on Friday's property that yield the most suitable material for the boat that Crusoe wants to build. Thus, Crusoe buys original factors of production *separately*. When Smith saves money, he impels other entrepreneurs,

such as Jones, to produce capital goods for him. Such goods are packages, stored-up labor / land, natural resources, and time. Smith buys some factors of production already *combined*. Why is there a division of labor between different entrepreneurs Smith and Jones, such that, first, Jones builds capital goods on level 20 in the production structure and then, second, Smith buys these goods and advances them further down to level 19 in the production structure? This happens because of entrepreneurial profit expectations. Both Jones and Smith profit from their localized knowledge of the market conditions for these particular goods.

John Henry correctly describes the entrepreneur as buying factors of production with money and selling the completed product for money. Profit arises when in the *M-C-M'* (Money spent – Consumer goods produced – Money received) sequence of events, $M' > M$. It is certainly not true, however, that the "economy" is "driven by aggregate spending." It is hard for all entrepreneurs to profit. Even if *M'* remains equal to *M*, economic progress can proceed sprightly. Entrepreneurs do not hope that *in the aggregate* "*M'* exceeds *M* and debt can be cleared." They hope that their own personal *M'* exceeds their own *M*, and it can well be at the expense of this relation for other entrepreneurs. In short, they hope to beat their competitors. (In addition, the formula is rather *M-C-M'-C'* to the extent that the entrepreneur spends his profits, or capitalist spends his interest income, on his own consumption. *C-M-C'* still holds for workers, too.) Henry goes on to say that "the production process in a monetary economy must begin with debt because workers must be paid and capital goods purchased *before* income-yielding output is produced" (King 2003: 344). This is emphatically not true because still more primal than debt are *savings*. *That* is what any production process must begin with. The producer loan market plays a role in entrepreneurial capitalism and figures into the explanation of business cycles, but ultimately it supplements direct investing.

In an early work, Schumpeter (2010) propounds a similarly strange thesis. His argument is as follows:

1. Entrepreneurs and only they drive the market.
2. Therefore, the market or an evenly rotating economy cannot change unless disturbed by creative entrepreneurial actions.
3. Entrepreneurs act by setting up novel production processes.
4. In order to act, they need to withdraw factors of production from other occupations elsewhere in the economy.
5. But in an ERE they have no profits to serve as startup capital. Moreover, workers consume everything they get.
   Thus:
6. In order to be agents of change, entrepreneurs need money.
7. But an evenly rotating economy cannot provide them with

money.
8. This is a catch-22.
9. Therefore, the only way to endow entrepreneurs with "purchasing power" to bid on factors presently employed in other, inferior from the point of view of those entrepreneurs, lines of production is by means of new credit from newly issued money.
10. This is a virtuous task because the entrepreneurs will end up improving the economic conditions of the consumers.
11. Hence, the need for inflation and credit expansion.

Against this we must once more object that voluntary private saving by means of abstention from both immediate consumption and hoarding is part of any entrepreneurial plan of production. The plan *begins* with saving, and an ERE is shattered the moment the first $100 is stuffed under the mattress. Any income whatsoever – wages, interest, rent, and not just profits – can be built up and eventually redirected from personal consumption to slurping up factors of production and arranging them into a business enterprise. Demand for the consumer goods Smith would normally buy drops which causes the factors employed in the making of those goods to be released from their tasks and redeployed into making the capital goods Smith is planning to buy in the future. Of course, the workers Smith unemploys by lessening his consumption while he is saving are in all probability distinct from the workers he overemploys by increasing demand for the new capital goods that he is planning to buy after the process of saving is complete. This is because the factors, including human capital, are partially specific. At any rate, issuance of debt under honest banking does not increase the money supply: the ownership titles to present money are transferred from one person to another. What Smith gets to spend because he borrowed money, Jones cannot spend because he lent to Smith. Debt and credit cannot in a laissez-faire economy with sound money increase *M*.

9. That real wages increase by means of savings, well invested

Suppose, Keynes begins by saying, that employment increases. Presumably, this means for him that more people are working, longer hours, and harder. This causes more goods to be produced, resulting in an increase in real income to labor. What Keynes writes next, however, defies reason: "The psychology of the community is such that when aggregate real income is increased, aggregate consumption is increased, but not by so much as income." (*GT*: 27) I will have more to say about this alleged "psychological law" in (I, 20). For now it is enough to notice

that real income is precisely all those goods and services that *can* and, assuming impeccable foresight, *will* be actually consumed. It's consumer goods' worth of money income. When real income for a community goes up, such as when there is greater prosperity with money incomes staying the same, consumption increases by exactly the same amount because *they are one and the same thing*. Therefore, "real income exceeds aggregate consumption" is a false and self-contradictory analytic proposition because it is part of the meaning of the term "real income" (to factors of production) that it represents all the final consumer goods purchased and enjoyed.

By aggregate real income Keynes really means all the consumer goods lying in retailer inventories and waiting to be bought, such that not all of them will be. Some of these goods will be languishing on the shelves, eventually to be disposed of at a loss. The entrepreneurial errors of this kind come to pass in the situation in which out of their *nominal* money income people unexpectedly decide to consume less and save more than they did before. Let us assume that they save in order to invest. Instead of being demanders of present goods, the savers become suppliers of present goods and demanders of future goods. Of course, they supply and demand *money*, but money is used to buy goods, now or in the future. The word "present" means in this context "complete, finished"; the word "future" means "incomplete, requiring further work to become ready for consumption." A saver exchanges the money he has saved on factors of production whose owners then use this money to buy finished consumer goods. He then waits until production is executed and sells the finished product for money which he also uses to buy finished goods. The factors buy finished goods now which is why they are called demanders of present goods; while the saver-entrepreneur buys them in the future, when his profits come into existence which is why he is called demander of future goods.

Let us in the second place assume that the initial starting point is an evenly rotating economy in which there is no net saving. If people decide to save more, then one can readily understand Keynes' next sentence in which he writes that "employers would make a loss if the whole of increased employment were to be devoted to satisfying the increased demand for immediate consumption" (Ibid.), i.e., if entrepreneurs attempted to keep replenishing *presently existing* goods as opposed to, as the higher level of saving now tells them, altering their plans toward increasing the length and complexity of the production structure and building more *future* goods. Consumers are supreme, ultimately determining the nature, quality, quantity, and prices of all goods, as well as appointing entrepreneurs and dictating the locations and methods of production. A decline in the demand for present consumer goods, associated with an increase in savings, leads to a

decreased derived demand for the factors employed in making those goods. But the savings are not lost but invested into more physically productive enterprises that are projected to yield more and better consumer goods in the future than there would be had everything instead been blithely consumed. The demand for the factors, including labor, used in those projects and especially in early stages of production rises. The factors are reallocated from evenly rotating old-fashionedly to novel projects. Keynes considers consumption and investment to be parts of the same blob of aggregate spending. He has no concept of capital structure and production stages.

Net savings are a disturbing factor in the economy. A decision to save more than is needed for capital maintenance causes a readjustment of the production structure. Keynes goes on: "to justify any given amount of employment, there must be an amount of current investment sufficient to absorb the excess of total output over what the community chooses to consume when employment is at the given level." (Ibid.) The "excess" exists because that portion of the total income that is not consumed but is rather saved and invested is higher than the similar portion in the previous production cycle. There are, the public has decreed, at the moment too many production processes that are churning out the same goods that are already available so as simply to replace them when they are bought, and too few production processes that use the higher level of savings to increase the standard of living in the future as compared with even rotation. To "absorb the excess" is precisely the job of entrepreneurs. The entrepreneurs must foresee which goods must be outputted at which time in the future that for the savers will justify their sacrifice of immediate consumption. They must arrange production in such a way that exactly the right amount of goods is delivered at the right time as consumer (whether of present or future goods) time preferences bid them. In saying these things I am assuming laissez-faire "sound" money and honest, i.e., 100%-reserve, banking.

As we saw in (I, 8), the very act of capitalist saving by one entrepreneur causes other entrepreneurs (directly or indirectly) to build novel capital goods. Resources are channeled into making intermediate goods that make labor more productive. This causes laborers to be employed more "fully." When the output of these new production endeavors is complete, it is presented to the consumers for judgment. The consumers' approval signifies a rise in their standard of living. The choice to save for the sake of (sensible or profitable) investments then results in economic growth and higher real wages.

In the long run, if the economy grows, then there will come into existence both more consumer goods and more producer goods per capita. If there is so much capital being used in the economy that complementary to it labor becomes dear, then an increase in population

figures becomes possible that affects positively every existing human's standard of living. Capital accumulation thus makes people more and more valuable to each other, creating economic friendships where before there was only competition.

In the short run, however, consumption and investment move opposite to each other: more of one entails less of the other. Intermediate goods are submarginal, receiving their value from the consumer goods created with their help. While the former are being built, and while provisions are being made to maintain them for more than one round of production, the quantity of the latter decreases. Again, this is not a problem because a saver renounces present consumption voluntarily. In doing so he becomes a capitalist-entrepreneur. His return, again provided he makes no errors, will cover the annoyance of his sacrifice. If he receives a profit, it is his return net of interest, wages of management, and the equivalent of insurance for quantifiable risk. (If an entrepreneur doesn't insure and nothing bad actually happens, then he gets gambling income, but however that thing is classified, it's not profit.)

Extra savings for an individual firm can come not only from abstinence from present consumption but also from investments in other firms. In such a case, one firm will expand at the expense of others which will be winding down their production. New technologies, lands and resources therein, and consumer tastes can make such reshuffling of resources profitable and therefore socially valuable. But increasing saving rates are at least as crucial for economic growth. This is not a trivial notion because false alternative doctrines of raising real incomes for *every* participant in social cooperation have been proposed, such as labor unionism, price controls, trade barriers, credit expansion, and numerous others. I do not mean of course that labor unions, etc. cannot exist alongside the process of capital accumulation; rather, all of the above are negative-sum and create conflicts between one group of people – such as union members – and other groups – such as the presently unemployed. Gains to one group are counterbalanced by losses to other groups, and furthermore overall wealth decreases. In other words, whatever progress in society does occur, occurs *despite* labor unionism, etc., not because of them. (a) Capitalist saving that is used to bring increasingly more resources, original, natural, and produced, under human control, together with profits received from employing these resources to make consumer goods realized by means of (b) consumer spending, are a match for economic growth made in heaven.

10. That creative advance occurs within equilibrium

Mises defines the term “plain state of rest” as partial equilibrium within some market, what we in (I, 1) called the supply and demand or SD equilibrium. This equilibrium occurs all the time in the real world. What he calls “final state of rest” is general equilibrium or the state of affairs in which all profits in the whole economy have been equilibrated away and all losses have been escaped. This we have called the revenues and costs or RC equilibrium. This equilibrium is an “imaginary construction” to which a real economy tends but which it never reaches. An “evenly rotating economy” is general equilibrium repeating itself unchanged day in and day out. The ERE is a sound concept for two reasons. First, many desires are soothed today and come back again tomorrow. Second, goods that satisfy desires depreciate in the process of being consumed. It is necessary to produce food every day and replace the batteries in the remote control every year or so. Production must go on cyclically.

Each exchange made within the ERE is profitable for both parties; if it were otherwise, then the exchange would not be made. A worker benefits from selling his labor, a capitalist benefits from receiving interest for abstaining from present consumption, and so on. Everybody is better off participating in this economy, evenly rotating though it is, rather than (a) not exchanging in this particular case (and therefore doing the same whenever this case comes up in other cycles of the ERE) or (b) creating an autarkic society in which there are no exchanges, and no thought is given to producing for exchange in the first place.

Exchanges go on as long as people perceive opportunities for mutual benefit and stop whenever no such improvements can any longer be discerned. But an equilibrium arises far sooner than at the objective point when for all people the only way of increasing one person’s welfare is at the expense of some other one as far as matters appear to an economist qua contemplator rather than entrepreneur qua actor. We are not obligated to presuppose “perfect knowledge” or consumer omniscience, call it PCK.

An aspect of the ERE is that it does not permit capital gains or losses; there is neither new investment (or saving for this purpose) nor disinvestment (or new spending). These hold not just for the entire economy but also for every stage of production and in fact for every producer. Thus, Crusoe’s fishing rod is maintained in perpetuity, and Crusoe never seeks to replace it with fishing nets.

In an ERE (a) what is being produced, (b) how it is being marketed, (c) the methods of production, and (d) the firms’ internal organization stay the same. The money profits, like the savings, too must be zero, though business owners may be paid wages for their services as worker-CEOs. Companies neither produce anything different nor produce goods by means of different techniques in different cycles.

The ERE is imaginary insofar as people repeat the same activities one cycle of economic rotation after another. Time is abstracted from in between multiple periods which iterate unchanged, though not within them where time is still a full-fledged factor of production. The same goods are produced and consumed in the same way. There is no depletion of natural resources. No new management practices are implemented. There is, most important, no action aimed at deviating from the routine. The economy is in constant flux, but it always looks the same from one cycle to the next.

All income is permitted in the ERE except monetary business profit and loss if those things come about as a result of novel and unpredicted human undertakings. A "novel undertaking" is defined as an act of changing any (a)-(d), that is, (a') introducing a new product or service to the market, (b') attracting customers to an existing product, (c') trying a new and more efficient combination of factors within a firm, and (d') lowering costs through better management. Call a successful such project "creative advance" or CA, improvement in consumer welfare. There is an ERE if and only if there is no CA.

The technology-management nexus "inside" the firm on the supply side is characterized by physical productivity and unit cost. A method that combines factors $3A + 4B + 10C$ to yield product $2P$ is an example of the former; the fact that A costs \$20, B costs \$50, and so on, of the latter. An increase in productivity that makes the same factors produce $5P$ is similar, as far as the company is concerned, to a decrease in costs of all factors by 60%.

The product-marketing nexus "outside" the firm deals with unit revenue and value productivity. The former is reflected in P's price: the more beautiful the product, the higher it can be priced. The latter, in quantity demanded insofar as more people will be willing to sacrifice other goods for the sake of P. Both product development and marketing are united for the purpose of influencing demand. Both the substance and style of the good contribute to profitability, and revenues can pick up via either (a') or (b').

In the presence of PCK creative advance can emerge only via actions of entrepreneurs, call this entr-CA. At t_1 Smith may choose A over B. Later, at t_2, Smith may change his tastes to the opposite preference. It is not clear that Smith is happier at one time as opposed to another. This is because there is a lexicographical priority of Smith's nature N, character C, and happiness H. If we hold N and C fixed, then we can compare Smith's H at different points in time. But it makes no sense to do this if C has also changed from one time to another, and Smith is now a "different person." But if an entrepreneur has come up with product R, and Smith prefers it to A, then Smith could continue to evenly rotate by consuming the old bundle of goods, but he voluntarily

likes some new bundle containing *R* and switches. There is a clear sense in which Smith's more important desires are now soothed, and the economy has grown.

In a realistic economy, when consumers learn new things about the state of the market, they too bring about CA or con-CA. Thus, if Jones was going to buy a kitchen table at Macy's, and his neighbor helpfully suggested that he try IKEA, then there is also economic improvement. CA then can come from the consumers as well, such as by way of finding out new products through personal research, word of mouth, web reviews, and all that.

The consumers can be more or less active. Normally, entrepreneurs are in control, they decide the extent of choices available to the consumers. Consumers react to a new object for sale in their environment. With con-CA, however, it is the consumers who take the initiative, decide what they want, and signal the entrepreneurs to adjust production. The latter are compelled to deviate from their routine because the former do. Thus, if one's car breaks down, it is his job to find a good mechanic. Then it is the consumer who initiates the creative advance in terms of new opportunities for trade. A change in the demand for Smith's product affects this product's *price* and *quantity supplied*. Changes in the demand for other people's products affect (1) derived demand for factors of production, therefore (2) the prices of those factors, therefore (3) Smith's costs of production, and finally (4) his *supply as a whole*. These events yield profits and losses and therefore take us out of the present ERE.

Consider that advertising can seek either to inform or to persuade. Persuading ads are resorted to in order to make a good more attractive and increase its value productivity. Consumer demand consists of (1) the good being demanded and (2) the man demanding it. The latter includes (2a) how much he demands it relative to all other goods and (2b) how happy he is enjoying it. Advertising seems to leave (1) unchanged and change (2a) and (2b). Is this in any way problematic? A possibly odious example is giant insurance companies advertising incessantly, with each company apparently advertising only because all others do. If they all were to shut up, they could lower their prices. However, information-providing, (relative) taste-changing, and (absolute) pleasure-enhancing (through the kindling of desires and thereby increasing the amount of utility juice sloshing around in the heart) aspects of advertising cannot be separated. The same ad will try to do all three. Even if taste-changing is somehow socially wasteful (though what if the consumers *enjoy* being persuaded?), the other two components of advertising are legitimate. If there is an inefficiency, it must be asked what the alternative is. Banning advertising will surely result in an ignorant and colorless world. As regards (2a) and (2b) then,

the consumer "melts" upon being exposed to well-made commercials, and

> things that are frozen are closely bound together, so as to be hard to pierce. But it belongs to love that the appetite is fitted to receive the good which is loved … Consequently, … melting denotes a softening of the heart, whereby the heart shows itself to be ready for the entrance of the beloved. (*ST*: II-I, 28, 5)

The "arms race" excites the consumer, enlivens him, and prepares him for hearty enjoyment of life and prosperity. What is not for an economist to like?

Entr-CA marches on not for its own sake for the sake of consumer happiness. There is no "upgrade for upgrade's sake." Improvement in (a) is a quintessential novelty: better quality of products. Improvement in (b) signifies more happiness from the consumption of an old product. Improvement in (c) entails higher quantity of goods produced, and improvement in (d) lowers prices.

From the point of view of an individual entrepreneur Jones there are three not two categories of people: Jones himself, the consumers, and other entrepreneurs. Adventures of consumer demand make Jones' life *risky*; actions of other producers make his life *full of surprises*; of course, Jones himself is fully on top of things in his own business and suffers from neither. We will see later the exact difference between risk and surprises, for now note that if Jones is empathetic enough, understands his customers well, and is tuned in to the flows of demand, then he can (almost) eliminate risk; the ability to surprise one's competitors, however, is profoundly a disequilibrium phenomenon.

To recap: changes in consumer tastes within the existing set of goods and services do not necessarily bring about any new creative advance; improvements in consumer knowledge of the market result in con-CA; and explicit successful introductions of novelty constitute entr-CA. (*Un*successful such introductions are less creative advance than destructive retreat.)

Keynes is therefore wrong when he writes that "in equilibrium… both the value and the cost of current investment must be equal to the amount of current savings, and profits must be zero; … the condition of zero-profits means that *aggregate* profits are zero" (*TM*: Vol 1, 152). If the money supply does not change, then if money flows to *A*, *B*, and *C*, then it must of necessity flow away from some *P*, *Q*, and *R*. If *A* profits, then *P* loses. Aggregate *monetary* profits therefore may hover around zero even in a real economy, just as overall *psychic* profits are never zero, even in an ERE. Furthermore, this condition, namely, the aggregate profits being zero without the specific profits and losses of each company also being zero, is not sufficient to ensure that the

economy is evenly rotating. If profits and losses from novelty-generating entrepreneurial undertakings are permitted, then the matter and pattern of either consumption or production or both are liable to change, and there is no ERE.

On the one hand, an ERE is a fiction, a "world of soulless unthinking automatons" (Mises 1996: 248), since we ex vi termini force people not to act. On the other hand, an ERE is neither logically nor praxeologically impossible, merely economically implausible and unrealistic; it is almost never the actual state of human affairs. This is because as long as psychic profits are being had from exchanges (relative both to not exchanging then and there and to life without division of labor at all), the members of the ERE will remain living and breathing human beings, even if monetary profits are everywhere zero. The reason is that action is defined as an exercise of human power over nature that causes the future to be different from the past in terms of the happiness of the actor than it would be without the action. Within an ERE cycle, there are such actions. In between cycles, there are not. The difference may be put this way: people in an ERE cannot choose to alter or stop their activities from one cycle to the next, but they are free to arrange the initial cycle.

Of course, the phenomenon of excess of monetary profits over monetary losses does occur, but it requires an unusually precise convergence of anticipations of the future by the various entrepreneurs in the economy. If Smith has an idea for producing good *A* which he deems particularly profitable, then in the process of saving money (1) he drives down the demand for Jones' *B* (by refusing to spend this money on *B*). By the time he finishes saving, many of the capital goods he needs have been created; one way or another, (2) some factors of production are bid away from Jones. Finally, when *A* is ready to be sold, (3) demand for *B* falls still more, as consumers spurn *B* in favor of *A*. If Jones foresees these calamities, then he will fire or sell some of his factors of production, reduce quantity supplied, and come out even. He may even try to one-up Smith by imitating him quickly enough. Smith's profits then will be at the expense of income to Jones' factors of production. Equally likely, however, is the scenario in which Jones is ignorant of Smith's designs. He is surprised by the higher costs of making *B* and fails to foresee lower demand for *B*, thereby paying his factors more while receiving less revenue. Smith's profits in this case will be counterbalanced by Jones' losses. An economy in which profits exceed losses is progressing and a "good" thing. Interestingly, Taleb (2010) reverses this argument, claiming that failing companies subsidize the consumers – "the more bankruptcies, the better it is for us" (181). In other words, the idea is that for failing firms costs exceed revenues which means that the revenues are "too low" which means that their

prices are low which is good for the consumers. Of course, this is nonsense. It is true that a businessman who is losing money may be said to be giving his stuff away. But an economy is characterized by a measure of stability. A company that is losing money cannot evenly rotate, which means that it is taking resources away from uses deemed more urgent by the consumers. The consumers are telling the poor company that it had best revise its business plan. The factors involved in production will have to be let go, and who knows how soon they will find employment again and how well-paying their new jobs will be. A doomed endeavor sucks scarce resources out of the economy improvidently. In other words, prices can be low, and consumers well-served even if the costs of doing business are also low and the company is making profits. Yet it can also be that prices are high while costs are higher still, preventing continuous production and service and necessitating business contraction and curtailment of services to the firm's customers. A loser subsidizes his *workers* not his customers. Losses then are evil per se but may be good per accidens as a sign that someone else is profiting.

A progressing economy is defined as a conjunction of two conditions: (1) capital accumulation and (2) profitable use of that capital. An economy is *retrogressing* if either (1') capital is consumed and destroyed, even if doing so is profitable, such as due to a rise in time preferences; or (2') there is accumulation of capital whose owners lose money in the act of using it. This is because such a thing is not accumulation at all. These goods will cease to be capital in future rounds of production because evenly rotating is not an option. So if profits exceed losses, that is when foresight is correct, then an economy is progressing if there is capital accumulation, and retrogressing if capital depreciates without being replenished. But an economy can retrogress even if attempts are made to accumulate capital if use of that capital is not profitable.

Often the situation is less pleasant. In order to create new capital goods, people save money, converting their consumption into investment. But profits are obtained precisely via consumer spending. A progressing economy constantly brings precisely *losses* to existing producers and reroutes production from consumer goods to novel capital goods to be used in new and longer production processes. Thus, on the contrary, in a progressing economy in the beginning and without superior foresight there may be an excess of losses over profits. Overall, however, profits will need to outweigh losses if any progress is to be made.

An ERE is characterized by both perfect knowledge and perfect ignorance in different respects. Every businessman knows exactly what he needs to produce to satisfy his customers. If Smith owns a machine

whose life span is 10 years, and to produce which takes Jones a month, then Jones starts production at the right time and delivers the new machine to Smith precisely when the old one breaks down. For his part, Smith has accumulated enough money to pay Jones. There is perfect coordination of actions such that everyone's expectations are fulfilled. At the same time, though everyone is dancing in step, everyone is also a slave to a routine. Everyone's plans dovetail each other, synchronized, but no one's plans ever change. Nobody has any idea how to escape the monotonous drudgery of even rotation. Nobody tries to do things better.

Note Cassidy's (2009) opinion that "a market is simply somewhere things are bought and sold" (25). This is a perverse definition because things are bought and sold in an ERE as well, but an ERE is hardly a free market. The market proper is not a place (like a market*place*), nor does its essence lie in exchanges made within it, rather it is a *process* of entrepreneurial discovery, planning for the future, and acting under conditions of uncertainty. It is a process of creative destruction or creative advance. For example, Friday may up and invent and build a tool that allows him to gather berries quicker. He then uses the freed-up time to gather nuts, counting on them to be so valuable that Crusoe will eagerly exchange plenty of fish for them and will later on work even harder to catch more fish for exchange. This is an example of a free market in action. The old ERE is dead and gone, the new one has not yet arrived. The relevant freedom is to try to improve one's own life and the lives of one's customers within an overall utilitarianism-satisfying framework. Hence the market can be called an institution that provides guidance and incentives to each person constantly to improve the ways in which he serves society.

We may call Cassidy's understanding of the market "crude" and my understanding, "subtle." The crude concept of the market emphasizes exchanges of justly acquired titles to property. It is linked with natural law: we assume that no one does *evil* by violating people's property rights. The subtle concept emphasizes continual economic progress and pertains to positive actions: everyone does some *good* by making society better.

Just as we read Defoe's novel curious about the steps Crusoe will take to gain control over nature and grow richer, so we are even more interested in watching our own much more complex economy evolve.

Consider, for example, the following argument. It is asserted that the government's Post Office "works." It appears indeed that it "gets the job done." It delivers letters without annoying its customers too much (though now that most bills are received and paid online, and most letters are sent by email, its main job has become delivering junk mail). But the relevant question is "it works in comparison *with what*?" The Post Office has been "working" in much the same way for hundreds of

years. Improvements to its monopoly services have been few and far between, measured only by major technological shifts. What is *seen* is a production process that achieves certain definite results. What is *not seen* is how a private competitive mail delivery industry would have evolved in place of the government-run enterprise. Experience suggests that the former would by today have become vastly better and cheaper than the latter is.

The market is free insofar as people are able to depart from the customary and habitual, innovate in any (a) through (d), and promote better or cheaper products to the consumers. The market, as we'll see in the following chapters, is a living organism, ever evolving toward either greater complexity or greater unity, eventually increasing in both. The market's "identity," such as it is, is the goods offered for sale and their prices, otherwise it is fully constituted by what it does, for it flows and will flow swirling on forever.

11. That the market process is a beautiful duality

Keynes does not discuss short-term and long-term business expectations for their own sake. His argument is that expectations are often disappointed because of the phenomenon of uncertainty. This bears looking into. As his teacher Marshall argued, in the short run prices are determined by consumer demand, while in the long run they are determined by costs of production. This is largely true but must be properly understood.

It is true that in equilibrium the income to a factor of production is equal to its discounted marginal value product. But in an actual economy the DMVP is not fixed in stone. It is what it is at present because people are not omniscient and do not possess perfect foresight, but neither is it sensible to say that they err. It is simply that profitable new ways of producing the same or different things have to be *discovered* and are discovered every day through an arduous process. It is simply not true that an acting person always chooses the most important project; he chooses the most important project from among those few that happened to occur to him or that presented themselves to him (or rather whatever he chooses is by that fact most important or best for him). He does not choose from the infinity of all possibilities.

In other words, some factor may be objectively undervalued or priced below its DMVP as it would be in some novel future business undertaking, but no entrepreneur may as yet have noticed that. As long as this state of *global ignorance* persists, we can have an equilibrium. Ignorance is characterized by at least two failures to know: first, one does not know how to improve and make more efficient his own

conduct; and second, he does not know how other people up to this very moment have labored to improve their own efficiency at serving the consumers. At one point Mises (1996) calls disequilibrium prices "false" because they will change toward equilibrium prices. (338) This is an infelicitous notion because the equilibrium prices too will change with entrepreneurial competition. All prices are "false" if by that we mean transient. Kirzner (2000) implicitly admits as much, talking about "false prices and less false prices" (160). Strangely, prices can become less and less false without ever becoming true.

In noticing an opportunity and acting on it, one subjects the economy to a disequilibrating jolt. An entrepreneur is first of all someone who breaks the mold, who explodes a comfortable and predictable ERE. It is necessary to distinguish between *disequilibrating* entrepreneurship by means of which profits go up, and *equilibrating* entrepreneurship by means of which profits go down. The latter (e) is imitation of both existing production processes and existing products. It is less entrepreneurship than economizing in the sense that it detects easy cash on the table, opportunities for profit that even an economist in his ivory tower can perceive. It doesn't take a lot of intelligence to help oneself to another businessman's profits by doing exactly what he is already doing. Yet, equilibrating actions lower prices and raise nominal wages, thereby benefiting the consumers, for which reason they retain plenty of dignity.

The former is inventive and creative and can escape being imitated for a while by coming up with (de_1) new and more efficient methods of production, thereby making the stuff that is already being manufactured cheaper and more plentiful, or (de_2) new and better goods and services. (In addition, one can cut costs while using the *same* technology, e.g., by organizing the business better; or generate extra enthusiasm among the consumers for the *same* product, such as by various forms of marketing like advertising and branding.) One can therefore disequilibrate the economy in two ways, namely, by lowering costs of production (while maintaining the same or higher output) and by creating all-new goods and services. One can dash and confound the imitators by innovating in either direction. We have dealt with the four paths of creative advance already. In the case of (de_1), if in a competitive industry one firm devises a technology that lowers marginal costs, it will obtain profits at the going price. This is an incentive to all other firms to adopt the same method of production. When they do, the industry-wide supply curve (which is horizontal) shifts downward, raising quantity and lowering the price until profits are again driven down to "normal" levels (governed by the rate of interest). Under monopolistic competition, a process that lowers marginal costs allows a company to sell at a lower price and thus underbid its competitors.

These latter will find it necessary to struggle harder themselves. For (de_2), a new product gives rise to a short-run monopoly in which the innovator tests essentially his conception of the consumer demand for his product. With time, what was once the monopolist's demand curve becomes the new industry's demand curve, and the erstwhile monopolist is transformed into one of many perfectly competitive producers whose individual demand curves are horizontal. Through equilibration, the monopolist price setter becomes a competitive price taker.

Arbitrage, such as buying commodities low in one country and selling high in another, is a special case because one unites two previously separate and unconnected markets. There is an aspect of disequilibration within *each* market as the arbitrageur profits from his alertness and audacity; the companies operating in one market (where the arbitrageur buys) experience an increased demand and also profit; and the companies operating in the other market (where he sells) are faced with a higher supply and lose. And there is an aspect of equilibration within the *now unified* market, insofar as the whole thing is poised to be balanced with similar prices for similar goods popping up over its entire territory.

The equilibrating process is real enough but is rarely seen in its pure form. Few people are pure imitators: in practice entrepreneurship usually incorporates both equilibrating and disequilibrating aspects. The reason is that in imitating one is sabotaging his own profits as much as those of the innovator and moreover signaling to other entrepreneurs to imitate them both. Therefore, if one is imitating a widget, then he will likely aim to manufacture not the exact same product but a slightly better one (anticipating that the consumers will agree with his judgment) or invent a cheaper and more efficient production technique or both. Equilibration is "virtually included" into disequilibration.

It is an important strand of thought in economics that no businessman can rest of his laurels or become complacent. Unless he continues to win each day anew, sooner or later he will be outcompeted and supplanted: his profits will be reduced to zero by equilibrators and turned into losses by other disequilibrators. The entropic law is fully at work here: untended to enterprises get worse with time.

Successful disequilibrating entrepreneurship is an act of transcendence of supposedly perfect yet actually illusory static conditions into a new and higher state. Once the economy is there, it begins its march toward a new equilibrium again. Yet this march is repeatedly disrupted by novel entrepreneurial actions. The general equilibrium, if such could exist, for a Stone Age society would be very different from the general equilibrium for present-day America, but in order to get from the former to the latter, numerous disequilibrating acts of a kind of "negation" or lifting up had to be performed. As Jörg Guido

Hülsmann (2000) puts it: “And, when it comes to real life, there are unlimited possible but unknown strategies, for human creativity constantly overthrows old patterns, adding new strategies previously unimagined. This fact prevents the identification of something like a timeless solution to problems of human life. Game theory can handle only those strategies the analyst himself can imagine.” (33) How do you improve upon perfection (of the equilibrium)? You explode it and rebuild it, and you do it over and over again.

The theme of a genuine if still relatively crude breakthrough which overturns the established status quo followed by the process of perfecting the breakthrough is immanent in all human affairs. The caveat is that in human actions there are no infinitesimal steps. There are smaller breakthroughs that build on momentous breakthroughs in the past, there are less significant paradigm shifts within larger paradigms. Just as an exchange of a pair of shoes for four clocks is discreet and does not mean that a quarter of a shoe costs half a clock, so any human contribution to technological advance is also a jump. An improvement in a technical system, however modest, is not really *imitation*, as economic equilibration is. But the general pattern indicated still holds.

Disequilibrating entrepreneurship banks on global ignorance not on human error. To be unaware of opportunities is something other than to err. Being blind is not the same as seeing illusions. For example, having a blank canvas rather than a beautiful painting is not an evil. The painting is under no necessity to exist, it is not something that *ought to be* (other than by the painter’s fiat), therefore its absence cannot be called evil. But creating a painting does improve the global state of affairs and is therefore good. Similarly, it is not the case that various types of market knowledge ought to be had by men, therefore ignorance is not an evil as error is an evil, though, again, discovery of truth is good. Saying that entrepreneurial profits are made possible by errors in human actions condemns our entire civilization to be a gigantic mistake because things can always be better. But that I am enjoying a cup of coffee does not seem to me to be a lamentable sin for which I should scold myself and resolve never to do likewise, just because in a decade the quality of coffee will improve.

By identifying the three types of entrepreneurship, e, de_1, and de_2, we can see how the market process is a duality of masculine disequilibrating disrupting yang and feminine equilibrating harmonizing yin, locked into an everlasting embrace and struggle. As they unite, they produce sweet fruit which is economic creative advance. Creative advance is an interplay of and friction between measured intelligent chaos and self-repairing order, change-amidst-permanence. Economic coordination is attained in the presence of future uncertainty because

human creativity takes place within an orderly system that encourages those acts that increase consumer welfare and discourages those that diminish it. When disturbed by an introduction of a profitable novelty, order or equilibrium soon reforms on a new and higher in terms of utility level. Entrepreneurs in the market afflict (disequilibrate) the comfortable (an evenly rotating economy) and comfort (equilibrate) the afflicted (the real economy). Thus, economic progress occurs on the edge between order and chaos whose interaction is the cause of all interesting events in the economy. Their everlasting dance is self-regulating and keeps the economy both stable and progressive.

Creative chaos is the most exalted force in the universe; destructive (or deceptive) chaos is the basest. The importance of this distinction cannot be overemphasized. There is a world of difference between disequilibration introduced into the economy by an entrepreneur eager to serve the consumers better and one wrought by a monetary disturbance such as inflationary credit expansion. Another distinction is between the market order consisting in the market's tendency toward equilibrium and the political order provided by the state. The latter at best protects society from the destructive chaos of violent criminals. A further remarkable fact is that the equilibrating forces are fully competent even as numerous entrepreneurs are disequilibrating the economy at the same time, on their own authority, and each in his own unique way. The motion from the state of disequilibrium including in multiple markets at the same time toward general equilibrium is guided not by any Walrasian auctioneer but by the actions of imitators or equilibrating entrepreneurs.[8]

Equilibrium, while undoubtedly pretty like a crystal or snowflake, is, also like it, frozen and immutable. On its own it's dead, a decoration. Chaos produces change, but it won't cut it on its own either because change can be both for the better and for the worse. *Improvement* is due to the waltz of chaos and order together. Thus, the concept of equilibrium is necessary for understanding not mere change but genuine progress on the micro level. The reason why the state of the market, including the actual prices in it, is what it is today is that it is an improvement, brought about by entrepreneurial competition, over the state of the market as it was yesterday, and this present state will be still inferior to the state it will take tomorrow. Such everlasting progress is our birthright, and the only means to it is (laissez-faire) capitalism.

It's not true therefore that uncertainty of the future felt by entrepreneurs causes equilibrium to "drop out of the picture," as per Joan Robinson's interpretation of Keynes. Equilibrium stays in the picture though only as *half* of it. Neoclassical equilibrium theorizing with its "perfect knowledge" abstracts away from *the* economic problem: how the market adjusts when people learn new things. It works with

pure order. Post Keynesian economics especially denies that, in the presence of uncertainty, markets adjust rationally at all. It postulates pure chaos. Radicals of the "Left" are often attracted to the vision of society as swirling chaos of madness. They are cynical to the extreme. Everything is morally tainted. Everyone is filth (except of course the leftists who alone are pure). Any successful person obtained his position or money in illegitimate ways. Under the veneer of bourgeois respectability lie sin, crime, and perversion. Post Keynesians, as a heretical sect, may project their contempt for order onto economics. But in fact both forces are active in the economy. Again, each *individual* is creative, has free will, is largely unpredictable, etc. But it is a fallacy of composition to jump to the conclusion, as some "radical subjectivists" do, that *therefore* the *market as a whole* is a chaotic mess. The market instead exhibits definite regularities such as pointed out in this book.[9]

This isn't "good and evil." Good is not yang and yang is not good, evil is not yin and yin is not evil. They are both complementary aspects of lifeforce, the élan vital, the soul. Many people think of the economy as a machine such that there are no limits to ways to tinker with or reconstruct it. Their favorite instrument is the omnipotent state. But if the economy is instead a quasi-living being, then its mode of operation cannot be arbitrarily changed. It is possible to wound or kill it with incompetent measures. Only God can make either a tree or the economy; man can only nurture and tend to them.

The interaction of market order and chaos is not itself either orderly or chaotic. These two are interdependent elemental qi which form a unity. Their intercourse, on the other hand, is the process of life. It's true that attributing teleology to the market itself, rather than to the individuals making it up, has definite limits. Perhaps the market is more akin to a growing plant than to a rational individual. It is not *literally* true that the market pursues equilibrium as an end. Nevertheless, it throbs with life. This hypostatization of the market does not of course prejudice methodological individualism.

Fitzgibbons (1988) summarizes Keynes as follows:

> Classical theory assumes that the economic mechanism is bound by laws of regularity when in fact, Keynes believed, a monetary economy is bound only by a process of random change.
>
> This is the sense in which Keynes, in Section II of the *Treatise on Money*, regarded prices as indeterminate; and in the *General Theory* he applied the same approach to the theory of interest. (122-3)

But we have seen that economic change is not random but intelligent, and not meaningless but for the better. Prices, including interest rates, are neither arbitrary (or "conventional"), changing without rhyme or

reason, nor rigid, incapable of being changed at all. They are determined by the people's subjective preferences and change, and should if the market is to work, as these preferences themselves change. (Keynes' defilement of interest theory is of course the cornerstone of his work.) The reason why Keynes rejected mathematical economics is not the reason why Austrians reject it, namely, that economics is fundamentally different from physics by studying human choice of which matter is not capable, there are no cardinal utilities, there are no constant relations between variables, men learn from their mistakes, the economy is not a game but is open-ended, etc., but that everything is chaotic and "exhibits extreme complexity" (*GT*: 305). He opposed the Austrian method of deductive reasoning by which the intellect explores the will just as much as he opposed mathematics. In this sense Keynes was a nihilistic anti-economist.

This conception of entrepreneurship is a union of the views of Schumpeter who thinks of it as pure disruption and Kirzner who treats it as pure equilibration. It's true that all entrepreneurs seek profits: they buy undervalued factors, combine them into a final product, and sell this product for profit down the line. But whether they perform this work by means of *e* or de_1 or de_2 makes a crucial difference. For de_2, there is global *ignorance* within a wretched ERE that is shattered by one man's piercing insight. For *e*, there is a realization by all the other men of their *error* and resulting scramble to correct it. Disequilibration is not technological such as when a new production method is invented in a lab, it is economic as some entrepreneur perceives that the commercialization of this method is going to be profitable and acts on it. Contra Kirzner, attainment of "pure profit" is disequilibrating, what is equilibrating is the eradication of pure profit by imitators in the following rounds of production. We have seen in (I, 1) that disequilibrium between supply and demand is "bad" (inefficient, wasteful) for both shortages and surpluses, but that disequilibrium between revenues and costs is bad for losses and good for profits. Therefore profit-generating disequilibrating human actions are creative and socially valuable.

The state of equilibrium or the evenly rotating economy is characterized indeed not by "perfect knowledge" but precisely by perfect ignorance (of possibilities for further improvement). As soon as a disequilibrator has forecast the state of future demand and begun rearranging production in hopes of taking advantage of what he believes is a profit opportunity, assuming his foresight is correct, the even rotators affected by his actions who are destined to incur losses no longer suffer from mere "negative" ignorance, they are positively in error.

There is then a sense in which errors can be attributed to

entrepreneurs, and that is in the context of competition. Loss of money in the market is always a loss *to* someone. Smith who is evenly rotating is attacked by Jones and fails to defend, or Smith himself attacks but is countered elegantly. There is a chess game of wits and nerves, and Smith lost the battle. He thereby erred; he could have overcome Jones if he had done better but could not. If one could predict how others would respond to him in the competition, then he would obtain tremendous advantages against his opponents. All action depends upon other people's countermeasures being weak responses to it. Smith might be tempted to "give up" at the outset if Jones always responded powerfully. Victory in a competition is contingent on someone making a mistake.

In coming up with a possible business plan that serves to enhance consumer welfare, one has conquered ignorance; in putting this plan into action and reaping profits, one has won the fight due to other people's flaws as entrepreneurs. Thus, Frank Knight (1921) points out that an entrepreneur's success is not due just to his own good judgment and competent execution but "is equally a matter of (a) the failure of the judgment, or (b) an inferiority in capacity, on the part of his competitors" (281). It's all relative.

Prices do not "tell the truth… about how resources can and ought to be allocated" (Leijonhufvud 1968: 85). The momentary price system represents a consensus of the market. It's the best allocation, but only so far or up until now. A businessman can only "secure profit from knowing better than the market what the future will bring forth" (*GT*: 170). In acting on his profit expectations, the entrepreneur *alters* the prices, imparts *new* truth into the system, *reallocates* resources. The present prices are a status quo to be upset by human actions delivering the creative advance. The price system of the moment, whether equilibrated or disequilibrated, provides a baseline to entrepreneurs from which to introduce further improvements into the economy.

Entrepreneurial monetary profits are not obtained for any service demanded on the market. Profits are residual not contractual income. As Kirzner (2013) points out, they are the difference between the money value of two sets of contracts, between the entrepreneur and factors of production, and between him and his customers. In each of these contracts, something is supplied and demanded and exchanged. But the final profit is not due to an exchange. (Interest income is still contractual as an *intertemporal* exchange between a capitalist and workers / consumers.) Entrepreneurial services are not supplied and demanded on the market like ordinary goods, and profits are a disequilibrium phenomenon.

The entrepreneurial predicament is totally unlike the "equilibrium" situation in which you know what you don't know, but there are costs to learning it, and you then decide whether the costs of

finding out the truth do or do not outweigh the benefits of coming to possess the information. Potential entrepreneurs cannot avail themselves of any rational search procedure, costly or not, in looking for opportunities. They do not know what it is they're supposed to look *for*, or rather they know that they need to look for whatever all others have overlooked, but what is that? If any such search procedure were generally available, everyone would make use of it, which would instantly destroy any profits that might have been generated by it indeed for everyone.

In order to draw an important further contrast, we must distinguish between being *surprised* through error and taking a *risk* through ignorance. Both make the course of human events *uncertain*. The former will be discussed shortly; it arises out of the impossibility of making precise predictions of human actions, in particular of how other entrepreneurs will change the state of the market during one's period of production, i.e., while one is busy constructing his own product. It is not generally possible to know what upgrades competitors are now developing that might outshine one's own. The latter is due to the fact that one produces not for himself but for other people, and he can never be fully sure what the consumers will perceive as an improvement. The difference is twofold. First, an imprecise probability can be assigned to risk; no such thing can be done for surprising events. Second, perfect knowledge of the situation, such as the state of the consumers' minds, permits unfailing prediction of their behavior right now. On the other hand, even perfect knowledge of today's market is not sufficient to respond adequately to novel events. It may help to consider two extremes of consumer behavior.

On the one hand, there is entertainment. The key property of entertainment goods is novelty for novelty's sake. New shows, movies, and songs do not satisfy a desire for a diversion better than the previous productions; they are merely *different* though not necessarily *better* (as in, more beautiful, more stirring) than what has been created before. There can easily be degeneration of taste in entertainment from previous artworks to the new one, but all is forgiven as long as it is new. It is a common phenomenon that show *C*, according to even moderately refined sensibilities, is inferior to previous show *B* (which itself may have been a great improvement over some *A* still earlier), but *C* is still preferred because it is different from *B*. And just as *B* fell out of favor because it got old, so will *C*, even quicker than it. Entertainers must keep reinventing themselves and coming up with new things regardless of whether those new things are any better than the old things. This causes them to tire of the race for novelty much quicker than regular manufacturers do who can be assured that their wares will keep selling unless a genuine improvement has been unveiled. Mises (1994) even

attributes “anti-capitalistic mentality” to people in show business – actors, novelists, movie directors – because their fame is so fleeting that they dream of having the government prop them up permanently. (24)

In other words, normally, if Smith has commodity *X* out, then it can be made obsolete by Jones’ commodity *Y* down the line. But in entertainment *X* becomes obsolete not because a competitor has come up with a better mousetrap but entirely on its own simply by losing its zest due to the passage of time. A late-night comedy show host cannot use the same jokes the second time, he must come up with new ones every day. In show business, then, the risk is enormous, yet the capacity of each moment to deliver unpleasant surprises is low because as long as the product is a novelty, it matters little how it will compare with the competition in the future even if it takes years to make it. The only real fears are (1) that other entrepreneurs will “steal one’s ideas” and rob the new production of originality and freshness, and (2) that there will be “too many” new things happening at the same time in which case some may slip through the cracks and fail because people’s attention is occupied with their rivals. Present chaos causes anxiety, but it is a certainty that chaos will prevail in the future as well, meaning that the success of an entertainment venture depends largely on how bold and radical it is a departure from the traditional, not on how good it is in itself as critics or connoisseurs might judge. There are people with talents to thrive in this environment.

On the other hand, some goods are “iconic.” A standard example is the adventures of the Coca-Cola company after in 1985 it released the “New Coke,” an update to the same drink it had turned out for decades. The public’s reaction to it was poor, and the old version of Coca-Cola was reintroduced less than three months after being discontinued. The conventional interpretation is that the company had failed to consider the people’s “attachment” to the brand and to the old taste. Even if marketing research appears to show that people prefer the new taste within the confines of the consumer survey room, the public at large, when confronted with the new product, may vote against it. A product that within the company is deemed clearly superior may be rejected by the consumers for a variety of reasons. In some lines of business, then, novelty is everything; in others, the executives had better make sure that their brand name is not adulterated with unwelcome “improvements”; and still others are in between, having to balance both demands.

Therefore, strictly speaking and to refine Kirzner, only *e*- and de_1-entrepreneurs make “discoveries” – de_2s make “hypotheses” which can be called discoveries only in hindsight after they have been actually proven profitable, and this is the sense in which I will use this term henceforth. Moreover, just as creation is paired with its concomitant destruction, so discovery must be paired with forgetting. As superior

production processes come online, old ways of doing business are discarded. Surprise threatens all three kinds of entrepreneurs, but risk hangs only over those disequilibrators who dare to promote new products or market existing ones differently. The risk would exist even if the product were ready now; surprises come up precisely because the product is not ready now. Risk pertains to reading the consumers' minds; surprise, to reading the minds of other entrepreneurs, one's competitors. Risk in predicting consumer preferences and uncertainty as regards the actions of competitors are distinguished from mere actuarial risk, as of fire, that can be converted into a fixed cost through insurance. Uncertainty of course is present in all human interactions. For example, a manager hiring a worker will not at first be fully certain whether the worker will be a good fit for the job. But the main economic sense of uncertainty is in the context of business competition.

On the one hand, then, that Jones who is a worker drone at a dead-end job does not know how to beat flamboyant entrepreneur Smith in the fashion industry should be regarded as Jones' ignorance. But that Smith is resting contentedly while an even more flamboyant Robinson is designing what is destined upon its unveiling to be found a superior line of dresses is Smith's error. One is ignorant in not noticing what would be better (for himself or others), as well as not knowing how to build that better thing; but one errs in failing to sneak the envisioned improvement past the enemy's guards.

Entrepreneurs change the market, but "on average," entrepreneurs *themselves* do not change. Whether we pick the world now or twenty years from now, there will be entrepreneurs in it, and their quality and artistic prowess need not change predictably. What will be different are the state of capital accumulation and technological knowledge. These are what measure leaps in prosperity. Now entrepreneurs not only find uses for things previously unowned but also imbue the same objects with novel usefulness; they carry out production based upon new combinations of factors, as Schumpeter made clear. Innovation results in perpetual scrapping of old capital goods, repurposing those goods, and building new goods by entrepreneurs, thereby remaking the structure of production. Imitation involves merely quantitative accumulation of capital whose use has been shown at present to yield profits to the innovators. In this sense, entrepreneurs are creators of capital; they turn objects into capital goods in the very process of acting. At the same time, few things can be done with prime matter, hence entrepreneurial skill is paired with technological forming. Society's entrepreneurial power is a political issue. It depends on the freedoms and restraints that the laws bring to bear on creative human actions. It may perhaps be a eugenic issue, as well.

There is a sense in which business opportunities are objective. An

omniscient and all-powerful planner would know, when faced with a given economy, that various resources in it are objectively (in terms of their service to subjective utility) undervalued and could be reallocated to different uses that would enhance consumer welfare. The planner would then act on his knowledge. But in a market economy, each opportunity must be identified and seized by a fallible individual. The market is in perpetual flux, and what is profitable today will not be so tomorrow. The role of both personality and luck in business is crucial. If entrepreneur Smith fails to notice an opportunity and shepherd it toward success and profit, then no one Jones need come to the rescue. Smith may be uniquely positioned to take advantage of the situation. On the one hand, then, if Smith ignores an opportunity, his competition may pick it up. Here an individual misses out. On the other hand, if Smith ignores it, *no one* may ever take advantage of it. Here society as a whole misses out. Opportunity doesn't knock twice in either of these senses.

Steven Landsburg (1997a) asks what would happen if "we could identify the top 1% of the population in terms of gumption and exclude them from participation in economic activity." His guess is that "if you'd done this starting in, say, the year 1000 A.D., we'd still be living in the Middle Ages" (126). I think he gets it. With respect to bodily height, the more people one piles up, the less the sample will deviate from the overall average and the less each individual's contribution will matter. In entrepreneurship, quite on the contrary, more people will increasingly enhance the whole, and individual achievement will count more and more for society's economic status. Giants in height add little to the average height; giants in achievement mean everything for the standard of living of the average person. An entrepreneur is a hero who changes the world, a very tall person is a strange aberration to be ignored.

Suppose that at t_1 Smith embarks on a business venture. It is objectively true that if nothing interferes, then at t_{10}, when the product is ready, Smith will earn profits. Unfortunately, at t_4 Jones enters the game, unbeknownst to Smith, and builds a competing product that also matures at t_{10}. With Jones in the picture Smith loses money. Is the initial opportunity perceived by Smith at t_1 true or false? It seems that "opportunity," like "capital," has both objective aspects and mind- and heart-dependent aspects. When we see a person making profits, we deduce that there must've been an opportunity he exploited. We do not see how other people failed to perceive their chance at all; and we can barely learn how other people perceived it yet lost in the game. Failed projects tell no tales. Opportunities are such only in retrospect, when a successful entrepreneur in his golden years recounts how he got an epiphany about some great product and what he did to realize his

dream.

The creative entrepreneurial process operates within the context of the Hayekian "dispersed knowledge." I have seen several interpretations of this notion. Here are four of my own. First, the present price system is continuously synthesized from the price system of the immediate past, the value scales of the consumers, and entrepreneurial competition. The information used to construct this system is dispersed among every single market actor.

Second, consider that most entrepreneurs go into business already in possession of specialized technical know-how about some slice of a particular industry. They have specific notions of how to attract customers away from their competitors by offering them a better and cheaper product relative to what those competitors are (or will be when the product is out) selling. Other people may have no idea of the present state of the market, as contained in the natures of the production processes in use by the established firms and individuals. This technological knowledge is dispersed among various market actors.

Third, even if people are aware of what is going on inside different firms, they may not be as innovative as these inventor-entrepreneurs. The ideas of how to improve consumer well-being, such as the quality or quantity supplied and price of final output, are dispersed among the potential and actual disequilibrators.

Fourth, the knowledge of who out there is making profits and how and is ripe for being imitated is also initially concentrated among certain particularly attentive entrepreneurs whose actions constitute the equilibrating process, though it eventually spreads throughout the economy.

(2) can be duplicated by a socialist central planner. Even under socialism there can exist division of labor, with different managers and technicians attending to various machinery and factories. In principle, all that scattered knowledge can be presented to the central planner in a digestible form. In discussing the socialist calculation problem, Mises (1996) assumes that

> the director has at his disposal all the technological knowledge of his age. Moreover, he has a complete inventory of all the material factors of production available and a roster enumerating all manpower employable. In these respects the crowd of experts and specialists which he assembles in his offices provide him with perfect information and answer correctly all questions he may ask them. Their voluminous reports accumulate in huge piles on his desk. (696)

Mises does not consider the "intellectual division of labor" to be a fundamental obstacle to socialism.

Now workers labor but do not produce because the activities of almost every worker are submarginal: there are usually numerous workers in any firm, and each of them contributes only a small part to the final product. On the other hand, firms produce but do not labor. Even if a firm is identified with its entrepreneur-owner, the entrepreneur commands and directs, he can *speak* without laboring himself. Hence, we must distinguish between division of *labor*, i.e., original input or what goes in, within firms and division of *productive activities*, i.e., produced output or what comes out, in between firms. The former increases the productivity of overall labor, the latter permits the price system and market to emerge. A socialist society then has division of labor but no division of productive activities; all production is undertaken by the single state firm.

If socialism could work, then it would proffer two intriguing advantages over the free market. First, (4) could be made more efficient under socialism as compared with the free market. The reason is that all production decisions and everything going on within firms would be fully transparent to the planners so that equilibration would not depend on the slow, fickle, and irregular process of entrepreneurs sniffing out arbitrage opportunities but would be instantaneous. Innovators and imitators are mortal enemies, always at each other's throats. The equilibrating process is a battle of the sexes in which some entrepreneurs try to hold on to their private trade secrets, and others try to wrest these secrets away from them (e.g., by reverse engineering their products) and imitate them. (Imitation is *easier* than innovation, yet it still serves a social purpose.) Imagine how efficient the economy could be if all such secret knowledge could be made public. At the same time imitators are very vulnerable to both new offerings and cost reductions which cause them to suffer losses and discombobulate them for a short while. If the imitators were able to foresee these improvements, then they could adjust their productive efforts and avoid losses, and a central planner could arrange that.

A socialist who appeals to this argument is in the position of an advocate of the repeal of intellectual property laws, except that he goes much further. He demands that no secrets at all be kept by any individual or factory in the economy. Every production recipe is to be made public knowledge to be copied and used at will. For each item, its list of ingredients is to be recorded in a database accessible to all, and every method of production is to be "open-sourced." This would avoid unnecessary duplication of effort.

Second, with respect to (3), socialism would dispense with entrepreneurial errors. On the market, it is common for Smith to start a business that in a way is already condemned to losing to Jones who, unbeknownst to Smith, has come up with a better product or cheaper

shopping list of factors. If Smith and Jones are planning to launch their respective creations at approximately the same time, then Smith's efforts will have been completely wasted. A central planner could make sure that such competition did not occur. He could order Smith to cut back production without waiting for the market to signal him to do so.

It is clear now why socialists lament both "monopoly" and "dog-eat-dog competition." They are to be understood as holding that monopoly prices will be abolished due to instant equilibration, and entrepreneurial errors caused by competition will be abolished due to flawlessly harmonized growth.

It is true that the interaction between the yin of economic order and the yang of chaos is not perfectly efficient. It can be wasteful. That does not mean there is an alternative to it. Socialism would be an attractive possibility, if it were not the case that (1) is hopeless under it. The economic problem is not the allocation of given resources among competing ends. It is rather, given one such momentary allocation, how to *reallocate* existing resources so as to improve consumer welfare whenever a central planner gains new knowledge, such as a technological discovery. A typical production formula would be:

$$P_i = na_{i1} + ma_{i2} + \ldots + za_{ik}$$

P is a product; a is a factor of production like labor or a capital good; n is the amount of each factor used in the making of P. We can assume that the utility of each P to the consumers is given. Most factors like a are (1) scarce which means that if you use them in one project, then you cannot use them in another; (2) heterogeneous which means that factor a cannot be substituted for factor b; (3) complementary to each other which means that several different factors must be used to make any product; and (4) partially specific which means that each factor can be used in numerous but not all projects. The reallocation of any resource inevitably affects the entire structure of production within the socialist economy. Reallocating even a single factor, such as a_{11}, from one project to another immediately unemploys its complementary factors, such as a_{12}, a_{13}, and so on. To what use should these complementary factors be put? Putting a_{12} into P_7 will require that complementary to P_7 factors, such as a_{75}, a_{76}, and so on, be supplied. But from what other projects should they be withdrawn? And the possibilities multiply exponentially. In the first place, the market process is parallel, numerous entrepreneurs are rearranging the production system all at once. Some waste is inevitable under such parallelism, but it is a small price to pay for creative advance. Second, socialism cannot process changes even sequentially. With a complex economy, the problem of improving production under socialism is computationally intractable. It requires an exponential time $O(2^n)$ algorithm with an enormous n.

Again, let a single new factor of production be found. Given that this factor requires complementary factors to assist it in any project, how can it be incorporated into social cooperation starting with an evenly rotating economy? Isn't every resource in the ERE "fully employed"? Some entrepreneur must divine a profitable use for it and abstain from his own immediate consumption and save and use the savings to buy those complementary factors. This action alone is the introduction of chaos that disturbs the ERE without yet destroying the order it contains. It sends informational shockwaves throughout the capitalist economy which adjusts in response. If the entrepreneur succeeds, he will have perfected the system slightly. Bleaney (1976) poses a problem: "We have assumed that production exists in order to satisfy human needs, and yet capitalist production is ruled by a different principle – the principle of maximum profit – which is not necessarily reconcilable with the first." (216) The answer is that the search for profit by entrepreneurs is an incentive to reshape the production structure in such a way as to *improve* human satisfaction relative to the previous state of the market, and actual profits are a sign that resources have been reallocated to that very effect. There is a harmony between "production for use" and "production for profit." "Profit" indicates that things are becoming increasingly more "useful." But socialism cannot solve the problem.

This, I believe, is the essence of the socialist "calculation problem" or, to update the terminology, the computation problem. No supercomputer could ever crack it. In other words, the computation problem can be solved with "central planning" within a sufficiently small firm but not in the economy as a whole. There are then two kinds of socialism: of the Cuban pattern and of the Soviet pattern. The former maintains in perpetuity the evenly rotating economy extant at the moment of the "revolution." The computation problem is thereby dissolved, but at the huge cost of abolition of all economic progress. The latter ambitiously tries to improve the economy, fails utterly, and unleashes "planned chaos": it discoordinates the economy so much that complementary factors do not click into place. As a result, nothing works. Before the collapse of socialism we could rightly say, "We stand now upon the brink of destruction, for the reign of chaos has come at last." It's an irony that a system that completely subordinates the individual to the state, that regiments daily life, that takes away freedom and opportunity, that bans all dissent, is an economic bedlam. It is crucial to understand that "general welfare" means not any static unchanging utopia but fast, and utterly unpredictable, progress. What is meant by the compatibility of liberty and welfare and incompatibility of socialism and welfare is that only liberty can result in ceaseless economic improvement.

Isn't that interesting? We have an obscure problem in computer science (applied to capital theory), yet the entire world convulsed over it for a century. The irony is that in the heyday of socialism they had neither computers nor computer science and so could not conceive even of the nature of the problem, let alone of the fact that the problem was insoluble. Mises figured it out, and here I've stated the issue in more modern terms.

It is each person's struggling after profits and avoidance of losses on the market that causes resources reliably to be withdrawn from those occupations where they are needed least in order to actuate those branches of production that are projected by entrepreneurs to satisfy more urgent, in comparison, consumer desires. The moral is that capitalism "works" because under it people possess *agency* to care for themselves and each other, while under socialism they do not, and only the dictator has free will with everyone being passively taken care of by him. And a system in which one man takes care of a billion unthinking slaves is not feasible. One cannot realize the greatest happiness for the greatest number by depriving people of agency.

Looking at a certain firm *X*, we notice that if we take employee Smith and move him from department *A* within the company to department *B*, then more can be produced. As soon as we do that, we raise Smith's real wage to cover the new efficiency gains. This change involves a certain amount of creativity or ingenuity yet seems to be fully equilibrating: Smith is made better off without anyone else being made worse off. Call this move ASB, and a series of fully planned changes of this kind "dynamic equilibrium."

However, in the real world, when Smith is redeployed in such a manner, the immediate beneficiary is not him but the company owner. The company's profits increase (or losses decrease). This we will name move ES (tongue-in-cheek for "Exploiting" Smith). This is a disequilibrating act insofar as Smith is moved away from full employment. He contributes more to society but does not receive the full product of his labor. In addition, the interfirm economic system is afflicted with a measure of instability: when other businessmen notice *X*'s profits, they will wonder whether they can arbitrage them away by imitating *X*'s production process, call moves of this sort IXP. They can even develop various small improvements to the stuff *X* sells, thereby making their reactions to the seemingly innocuous ES have both equilibrating and disequilibrating aspects. Those businessmen sense an opportunity to appropriate *X*'s entrepreneurial gains and are themselves thrust into action.

Neoclassical economists fail to distinguish between the two points of view just laid out. They think that economic progress consists in "Pareto-superior" moves like ASB rather than in combinations of moves

like ES and IXP. Ultimately, ASB does actualize, but it does not arrive immediately but after the dance of numerous simultaneous ES and IXP initiated by different companies has commenced and concluded. There is no such thing as an instant jump in the market economy from one equilibrium to another as performed within a company by the company's owner or within a socialist society by the central planner. Rather, an increase in efficiency comes through the *process* of entrepreneurial competition. There is innovation in ES and imitation in IXP.

The advantage of inserting ES + IXP in between equilibria is that the market process generated thereby is immune from the socialist computation problem. Any change in prices initiated by an entrepreneur transmits information about how all other prices should be readjusted throughout the entire economic system. The two kinds of entrepreneurship are at odds with each other: promoting one serves to depress the other. The market strikes a balance between the social functions of innovators and imitators. Profits can be had but not for too long. This is how we can have subjectivism, human freedom, Lachmann's creative mental acts, and uncertainty of the future on the one hand, and definite economic laws on the other. Money on the market can be made by both creative disequilibration and routine imitative equilibration.

Because Keynes did not appreciate how prices coordinate, he dismissed the idea that free adjustment of wages and prices is to a large extent sufficient to mitigate economic slumps and alleviate unemployment. It is true that it takes time for prices and output to adjust to reach equilibrium, but the delay does not entail any inefficiency that checks equilibration. It is certainly not responsible for any "chronic" un- or underemployment. Equilibration generally takes as long as it takes for people to realize that their interests will be served by updating their supply and demand, prices and quantities. Even if there is an inefficiency, there is no substitute. And perhaps future economic and technological progress can improve the free market's responsiveness. Imitating Galileo, we might say to Keynes, "But it does equilibrate."

Sadly, the pendulum of public opinion swings between ossified socialism which is all yin and no yang and interventionist capitalism with its agitated and feverish chaotic business cycles which is all yang and no yin, without ever arriving at the golden mean of laissez faire. The sacred chase and balance between the masculine and feminine economic forces are disrupted. It is almost as if the devil unleashed his two avatars, wolves in sheep's clothing: Marx onto the more idealistic East in order to devastate its yang, and Keynes onto the more pragmatic West in order to sabotage its yin. As Marx deified the *state* to crush any "speculator," so Keynes, who described himself as a homosexual (and in

the LGBT style today, proud of it, thinking it superior to heterosexuality) "immoralist," embraced *anarchy*, achieved, oddly enough, also by using the state, only this time with perverse laws that regulate money and banking.

12. Market process, cont.

Welfare economics is a measure of the perfection or *ideality* of an economic system. The term "ideality" comes from the TRIZ framework, TRIZ being a Russian acronym that stands for "the Theory of Inventive Problem Solving." According to its developer Genrich Altshuller (2002):

> The Law of Ideality states that any technical system throughout its lifetime tends to become more reliable, simple, effective – more ideal. Every time we improve a natural system, we nudge that system closer to Ideality. It costs less, requires less space, wastes less energy, etc.
>
> Ideality always reflects the maximum utilization of existing resources, both internal and external to the system. The more free or readily available the resources utilized, the more ideal the system will be. …
>
> What happens when a system reaches Ideality? The *mechanism* disappears, while the *function* is performed. (16)

This last bit does not describe any sort of divine ex nihilo technology; Altshuller gives real-world examples in which this actually occurs. Although Altshuller writes that "the further an invention is from its Ideal state, the more complex the system will be," the key indicator of ideality here is not so much simplicity as internal unity. A system may be very complex, like the modern economy, yet exhibit a great deal of unity such that it functions smoothly and efficiently, and all of its parts work as one. That an ideal machine will make use of as much of its environment as possible does not mean that it should devour scarce resources, nor that a profit due to high revenues exceeding high costs is better than the same profit due to low revenues exceeding low costs by the same amount. Rather, an ideal machine will not leave a resource idle when it can profitably bring it into the fold. In this case, the relevant meaning of TRIZ is that an economy attains higher ideality when an ever-greater number of factors are well utilized in ever more useful projects.

The economy of course is a natural not man-made system which nowadays encompasses the entire world. There is no such thing as "labor economics" or "agricultural economics"; the economist must look at the whole system in which every part is influenced by every other part. Nonetheless, the degree of economic ideality is not an intractable

notion. TRIZ is primarily concerned not with "routine" problems as a result of solving which a system *evolves* but with "inventive" problems such that to solve them is to push the system up into a new, improved, and different state. The economic equivalent of routine problem solving is equilibrating entrepreneurship or imitation, and of inventive problem solving, disequilibrating entrepreneurship as described in (I, 11)

We can now adopt two criteria for the level of economic ideality: (1) coordination of plans and (2) total consumer preferences satisfied. Consumer sovereignty characterizes the unhampered market, as distinguished from both interventionism and socialism. In both of the latter the government usurps consumer supremacy: under interventionism with taxes, and under socialism by owning all output. In addition, under interventionism production is explicitly redirected by decrees into uneconomic channels via a myriad of regulations, and under socialism production lacks any rationality at all. The issue is not resolved by allowing a consumer goods market under socialism; the point is that consumers are not in a strong position to evaluate production attempts. Thus, a society can be relatively wealthy but suffer from the boom-bust cycle which means that it is poorly coordinated with respect to the time market. Alternatively, an economy may be very free, as it was in the U.S. in the 18th century, but only in early stages of development. (1) corresponds to "local perfection" or an equilibrium with global ignorance of possibilities for improvement; (2) corresponds to a movement toward "global perfection" and may violate (1) temporarily by means of disequilibrating entrepreneurship.

What is so good about these two things? Certainly pleasure is one, though not the only one, of the things we call good. Coordination of plans entails unity and harmony: all resources are at full employment and receiving their DMVP, and no "businessman," such as he is in an ERE, is losing money because of someone else's routine-busting actions. And harmony, involving at least lack of hostilities and hatred between people, seems paradigmatically good, too. For example, the attraction of the equilibrium is that there are in society as few losers and as many winners as possible. If a widget's price is below equilibrium, then which buyer will get the widget depends more or less on luck. Some other buyer would too have gotten the widget at that price; unfortunately, his intentions were frustrated by the existence and actions of the first lucky buyer. We want to avoid the situation of people getting in each other's way like this. Therefore, if the widget's price is raised to the equilibrium price, then the first buyer will voluntarily prefer to spend his money on something else, and there will be no competition for the widget. The equilibrium does not mean that Jones who agreed to pay $10 for the widget feels "more joy" from owning it, even if such things could be measured, than Smith – who is willing to sacrifice for the widget no

more than $5 worth of other goods – would feel if he were to get it. It means merely that "everyone's a winner." This is good enough ethically to justify (1) equilibrium as a local ideal and (2) the tendency in an economy toward an ERE for all goods and services.

At the same time, though there is no doubt a certain beauty to such a construction, this beauty is deceptive because something still better can always be crafted. Beauty is a real if subjective property, unless one does not want to treat such imperfect-knowledge equilibria as containing an aspect of perfection. A true final equilibrium, then, would be a "heavenly" society where there cannot in principle be any improvement. It is next to impossible to imagine such a thing, but that is exactly the implication of Kirzner's (2000) strange artifice of treating even an ERE as still discoordinated because it can develop further. This is paradoxical, for an inventor's action could be coordinative in Kirzner's sense with regard to a previous state of affairs but discoordinative with regard to some succeeding state. As a result, the term "coordination" comes to mean "closeness to absolute perfection" which is unhelpful. It may be that Kirzner subconsciously treats all chaotic disequilibration as "bad," hence all "good" entrepreneurship must perforce be equilibrating. We have seen that this is not so, and chaos can be quite wonderful.

Again, if entrepreneur *B* invents a mousetrap that is better than the sort produced by entrepreneur *A*, and *A*'s plans are thereby disrupted, then according to Kirzner even then *B* is not a discoordinating entrepreneur because in some sense *A* was *always* mistaken. *B* nudges the economy just a little closer to "heaven." But then when later on *C* improves upon the mousetrap still more and proves *B* wrong (by causing losses to him), it turns out that *B* too after all fouled up his business calculations. Is the entire economy always and at every moment a horrible blunder? If the market is "necessarily always" "in a state of disequilibrium, with respect to the infinity of knowledge that is beyond the (contemporary) human reach" (252), just toward what infinitely far away equilibrium are the Kirznerian entrepreneurs driving the market?

Kirzner defines equilibrium as "the state in which all market participants are, in effect, fully and correctly aware of what all others are doing" (241). That may be the neoclassical definition, but it has nothing to do with reality in which there are equilibrating tendencies in the economy despite the complete *lack* of such awareness. When I go to the store to buy groceries, I have no idea what other people are doing or planning to do. But I successfully come home with my food anyway. The price system does not convey *all* the information inherent in the market to me but just enough for me to carry on. It is unnecessary for every market participant to be as perfectly informed as a socialist central planner would need to be. The more pertinent definition of equilibrium is rather a state of affairs in which there are no entrepreneurial

monetary profits, all of them having been arbitraged away with no one having any further insights on how to grow his business by serving the consumers.

Incidentally, this reasoning shows Keynes' idea of involuntary underemployment tautological because from the point of view of the future, any present utilization of resources is suboptimal. Economic progress does not stop, and by the nature of it, future situations must be superior to the past.

The two criteria therefore combine the – at the same time conflicting and complementary – social virtues of harmony and progress. The free market under private ownership is the only institution that promotes both. A rigid caste hierarchy, for example, in which every man has a permanent place in society assigned to him at birth, might ensure harmony. But it will be at the expense of progress. Ditto for the "evenly rotating" Cuban-style socialism. If the state does not efficiently repress violent crimes, there might still be progress but also considerable strife in society, so harmony will be slighted.

We may compare and contrast entrepreneurship with biological evolution, such as it is. Disequilibrating entrepreneurship would correspond to a favorable mutation, and equilibrating entrepreneurship is analogous to the offspring of the mutant surviving and reproducing better than other members of their species and slowly, one generation after another, supplanting their less favored fellows. A mutation has numerous generations of animals to work itself out; the process of equilibration may last for several production rounds.

An equilibrium is like a world "already possessed," an "evenly rotating ecosystem," and a mutation must be lucky enough to help an organism wrest resources by force from those who would otherwise claim them as their birthright.

Another point of comparison is that an entrepreneur gathers for himself a variety of factors of production many of which are employed in other tasks elsewhere in the economy, hoping to profit from his foresight which he deems superior to the weaker foresight of the factor owners. Similarly, for evolution to succeed, it must be the case that for any irreducibly complex (IC) system in a cell or organ in a body, all of its components were previously parts of other subsystems, and a multiple mutation that collected these parts into a single molecular robot creatively destroyed those other subsystems yet overall without harm to (and in fact to the advantage of) the entire organism.

An obvious difference is that an entrepreneur can *move* factors of production from other locations into his own factory, while parts of old biological machines cannot really float to the right location all by themselves and assemble themselves there. It is true that their arrangement is guided by the DNA, but the DNA then too must simulate

knowing where to install the entire new structure. The complexity of the organ is mimicked by the complexity of the DNA program guiding its construction. This is a point that has not received much attention in the controversy: biomechanical complexity entails the ability not only to (a) generate IC integrated wholes and (b) sustain a minimal function in the system but also (c) effect super-precise, fine, delicate, and accurate to the nanometer positioning and alignment of parts in space and time.

Thus, looking at the chemistry of the cell, we are struck by what appears to be expert design. We say such things as that part *A* "wraps around" part *B* or that part *B* "transfers energy to" part *C*. Molecules are arranged into an order marked by specified complexity in close proximity to each other and intimately dependent on each other. Behe (1996) comments that in some biological structures, such as the flagellum of various bacteria, there are "dozens or even hundreds of precisely tailored parts" (73). Other instances of apparent design include blood clotting described as "a very complex, intricately woven system consisting of a score of interdependent protein parts" (78), and vesicular transport called "a mind-boggling process, no less complex than the completely automated delivery of vaccine from a storage area to a clinic a thousand miles away" (115). The tiniest failure in balance or proportion or symmetry or mutual anticipation, then, and the entire machine is destroyed. Of course, with this, a staunch supporter of evolution's power may find himself in full agreement. His case too depends on the fact that a badly constructed machine or malware in the DNA will kill the organism with an unlucky mutation which will leave no descendants. Occasionally, however, a chance mutation will get the job done. Since we know nothing about the history of organisms stretching back billions of years, we cannot be decisively sure that such a thing did not happen.

Another difference lies in the fact that evolution may be stuck at a dead-end equilibrium because in order to move to a state higher in complexity, the organism must suffer a number of individually debilitating (though jointly creative) mutations that in the meantime hobble it in the competition of life. In evolutionary theory, this is a no-no. Entrepreneurs, on the other hand, can find a way out of any equilibrium. The present state of the market does reveal the relative importance of every resource in the scheme of things, but the status quo is no obstacle to an acting man: even highly valued resources will be reallocated if the anticipated profits are high enough. An entrepreneur can grab any factor from anywhere on earth that is for sale or unowned and insert it into a production process however he chooses. Every resource, whether already employed or still an unappropriated part of nature, is ripe for the plucking if profit expectations will bear. The economic entrepreneurship may be likened to evolution, but human

businessmen arrange factors of production into their enterprises though by *secondary* causes, not primarily by *physical* causes but via intelligent design; the evolutionary technique is entirely mechanical and random. Still, human civilization is at most 10 thousand years old. Life has been on Earth for on the order of 10 *billion* years. We do not know whether the time allotted to evolution, namely, 1,000,000 years of *random* trial and error for every 1 year of human technological and economic *intelligent* trial and error, is not sufficient quite without intelligent design to do the work claimed as its merit, i.e., to simulate the efforts of human inventors and entrepreneurs.

Nature "tries" the mutations, and those found "erroneous" are ruthlessly eliminated; the consumers try the entrepreneurs, and entrepreneurs both act ignorantly and err because they could not predict their success or failure prior to being tried due to both risk and surprises. In other words, the intelligent variation in the economy consists in four facts: businessmen deliberately seek to (1) lower costs, (2) increase revenues, (3) design the end product, and (4) invent and set up a method of production. Moreover, humans deliberately maneuver so as to win in the competition and profit. They want to outfox their opponents who in their turn are trying to beat them. These take intelligence, as well.

We must not make the mistake of denying the *possibility* of intelligent design, but we must be humble in accepting that we can rarely know whether a particular biological machine has been improved with intelligent design at any time during its existence. This injunction is fully in accord with St. Thomas' opinion: "no one can know whether he has sanctifying grace" by reason alone (*ST*: II-I, 112, 5). In other words, knowing that one has grace "with certainty" is itself a grace-infused private revelation. Grace does what nature cannot, but nature must exhaust and prove itself first. At the same time, though it is difficult to estimate the precise limits of evolution, it is permissible to judge "conjecturally by signs" whether ID is *likely* to have occurred or not.

The fundamental puzzle of entrepreneurship can now be expressed as follows. Let Crusoe exchange his fish for Friday's berries in an ERE. Crusoe sells 1 fish to Friday for 100 berries. Smith enters the Crusoe-Friday economy and offers Friday a fish for 50 berries. He thereby puts Crusoe (at least partially) out of business. Similarly, in a real economy if an entrepreneur, Smith, has decided to disturb an ERE, then he bids away both the factors of production and consumer money away from some Jones who is evenly rotating without care. This results in a loss to Jones. An instance of monetary profit to one entrepreneur therefore often enough entails at least one instance of a monetary loss to another (though ideally profits come at the expense of wages to

workers, not losses to other entrepreneurs). The puzzle is: Why do *both* Crusoe and Friday profit from association; Smith profits *at the expense* of Crusoe / Jones; yet both situations seem perfectly legitimate? The answer is that to the extent that harmony suffers temporarily from progress, it is simply unavoidable economic growing pains. At first, Crusoe and Friday are perfectly coordinated, with each man supplying what the other demands and being seemingly happy. Smith introduces discoordination into the economy, but that is not a bad thing because he improves the situation of the consumers. Even when the consumer is Friday alone, nevertheless, Smith frees Crusoe, a human resource, to try to produce something else. Crusoe must respecialize, but when he does and a new ERE is created, all three people will be the richer for it.

The puzzle can be further reworded thus. Given that upon disequilibration workers' *nominal* wages fall as compared with a previously prevailing ERE, with some of those wages metamorphosing into profits, how can it be that the standard of living (and therefore *real* wages) rises? It may certainly be that the new ERE that will eventually be established will be superior to the old one in terms of welfare, but is the intervening disequilibrium also superior to it? The answer is yes because Smith's function as an entrepreneur is at least as valuable as the functions of those factors working for his competitor Jones which have diminished in importance. The consumers around whom the economy revolves no longer think as highly about Jones' workers' contributions to their happiness as they did before. They prefer to do business with Smith who is fully justified in enjoying his profits. Jones does not have a right to his customers, nor his employees to their wages. Both were in retrospect overpaid.

Curiously, Hayek (1948) argues that

> the concept of equilibrium merely means that the foresight of the different members of the society is in a special sense correct. It must be correct in the sense that every person's plan is based on the expectation of just those actions of other people which those other people intend to perform and that all these plans are based on the expectation of the same set of external facts, so that under certain conditions nobody will have any reason to change his plans.
>
> Correct foresight… is the defining characteristic of a state of equilibrium. (42)

Given the distinction proposed here, the term "foresight" has two meanings. The first and Hayekian meaning is that *all* participants in social cooperation receive *psychic* profits from association (specialization, division of labor, and trade) in every round of their economy's even rotation. These profits are as high as possible insofar as

the marginal benefit of every resource is equal to its marginal cost to the rest of society. No one's efforts are seemingly wasted. Of course, these profits are finite and definite; it's not the case that everyone enjoys perfect happiness. The second, my own, meaning consists especially starkly in the reception of *monetary* profits in a real economy. Correct foresight means "more correct than the foresight of other entrepreneurs." *Some* participants in social cooperation foresee that their stuff will be accepted by the consumers and succeed, while others are left in the dust, suffering losses in the competition.

Creative disequilibration is not guided by a provident hand as within the firm by the CEO; coordination is accomplished by signaling in the market via changes in supply and demand. Losses are suffered when an entrepreneur has not anticipated the changes in the demand or costs for his own product correctly. Profits are enjoyed when an entrepreneur has correctly perceived future high demand, while others, including both factors of production and his competitors, remain unaware of the opportunity.

This understanding sheds light on the problem of patents. They are usually justified by the argument that they promote innovation. That they might, but innovation is not the only kind of entrepreneurship. Even if patents encourage innovation and disequilibrating entrepreneurship, they *discourage* imitation or equilibrating entrepreneurship. It cannot be decided a priori whether the good of the former effect outweighs the evil of the latter one.

"The fact that my fellow man wants to acquire shoes as I do," Mises (1996) writes, "does not make it harder for me to get shoes, but easier." (673) Why? First, there are economies of scale related to mass production. But second, because the shoe market is so large, with everyone having at least a couple of pairs and usually more and replacing them every so often, that innovating within the industry, even if it allows an entrepreneur to capture a comparatively small segment of the market, can still translate into high revenues. Hence the rivalry among firms is fierce, making it easy to obtain ever better and cheaper shoes.

How this is relevant to the subject at hand is that *it matters whether one is the first seller to the market*. In this case, all he needs is his predicted consumer demand curve. Given that curve, one needs only to set that price / quantity supplied combination which maximizes his profit. (Of course, the businessman may have only a vague idea of the shape of this curve and initially make a mistake.) As imitators-arbitrageurs begin to appear one after another shortly after the initial inventor's success, however, the prices of the good being produced begin to head down, and the prices of the factors entering into the making of those goods begin to rise as the imitators bid them up. A single

entrepreneur acting on a great idea will garner profits for himself. The moment a second (and third, etc.) entrepreneur sees, by observing the first, that this idea makes sense, both men's profits will, in a price war, chase each other down to zero.

All three types of entrepreneurship, arbitrage, speculation, and production, involve buying low and selling high. But only production allows one to receive profits for a decent amount of time. This is because of (1) production time and (2) the producer's trade secrets. For example, if a firm makes its production process more efficient and lowers costs, it can outcompete others on price. Its superior technique is for a time a secret. It will take its competitors some time to catch up with their own technology and to manufacture goods with its help. In the meantime, the first seller's profits are secure.

Contra Marshall, an economist should *not* be excused for holding that the "normal" price is the long-run price. There is no normal price as distinct from the irritating "abnormal" oscillation around the normal (i.e., just? efficient?) price. Every price is perfectly Ok, and the only use for the medium-term price of perfect competition is to illustrate the equilibrating tendencies in the economy. The medium-term price is never reached in any actual market. There are numerous disturbances in the economy other than weekly or monthly demand fluctuations that somehow cancel each other out. The normal prices are those prices that would eventually be reached if all disequilibration ceased. But the normal prices in the equilibrium sometime in the future depend on actual prices right now. Since the latter are updated every minute, so are the former. Hence, there is nothing special about the normal prices as dreamed of today as distinct from the inevitably different such prices as imagined tomorrow.

To summarize, a successful initial disequilibration for product *P* results in monopoly profits due *in the short run* to consumer demand for *P*. Later on, equilibrating imitation results in the disappearance of profits with price and quantity supplied of *P* being determined *in the medium run* by costs of production. Or rather the actions of equilibrating imitators cause the two values to converge. The closer they come together, the less lucrative imitation becomes, and the more disequilibrating creative advance is encouraged. Finally, innovation and imitation elsewhere in the economy for goods *Q*, *R*, … cause losses to even rotators producing *P*, with *P*'s price and quantity being caused *in the long run* by consumer demand for all other goods. Regarding individual firms, equilibrating forces reduce profits to zero; regarding whole industries (comprising things like *P* and its substitutes), they equalize the average rate of return in them.

Monopoly prices on the free market then are essential and temporary. Therefore there are three senses of the term "monopoly."

First, a legal privilege to a business firm that allows it to enjoy *permanent* profits because potential equilibrators are banned by law from competing with it. Laissez faire by its meaning precludes any such arrangement. Second, ownership of an essential to survival resource like an oasis in the desert wherein the owner can extort any amount of money from travelers dying of thirst. In this case, the customers buy not pleasure which anyone can renounce but life itself which is a precondition for enjoying any pleasure. This meaning is simply irrelevant in the modern economy in which people *transform* deserts into thriving civilizations. Third, exclusive ownership of the entire stock of some useful resource. This too is moot: the world is a big place, and there are always substitutes for any good. There is no special problem, inefficiency, or injustice to monopolies.

Keynes imagines a society in which the "marginal efficiency" of all capital goods – essentially that discount rate at which the cost of a marginal capital good is equal to the sum of that good's discounted product over its lifetime – is zero "and would be negative with any additional investment." He argues that positive net savings are poisonous in such a society because "entrepreneurs will necessarily make losses if they continue to offer employment on a scale which will utilize the whole of the existing stock of capital" (*GT*: 217). It is plain that this would be so only if no disequilibrating entrepreneurship were possible in which case any new investment due to these savings would indeed only lead us away from perfection. But any equilibrium nirvana is only apparent and only to dull minds who cannot envisage any improvement to it.

This is how it is possible to reconcile (1) indeterminacy and uncertain nature of competition, (2) entrepreneurial discovery, and (3) a tendency of the economy toward equilibrium. For with respect to (1), losses are self-penalizing; a person who continuously loses to the competition will sooner or later cease to be an entrepreneur. Entrepreneurs compete amongst themselves. They do not seek *success* which is a relationship between a person and his chosen goal but *victory* over others. If n% of all restaurant businesses fail, then one needs only to be among the top (100 – n)% of best restaurateurs. Everyone's starting position is equal vis-à-vis unwelcome surprises; tactical incursions are both a weapon of all and an obstacle to all. I will have more to say on this in the next chapter. (2) represents innovation and disequilibrating entrepreneurship, while (3) represents imitation that inaugurates a procession toward equilibrium.

For this reason, the term "efficiency" has two meanings: one applicable to equilibrating entrepreneurship, the other to disequilibrating entrepreneurship. Capitalism is efficient in "allocating resources" in the first sense in that arbitrageurs invest capital into those

lines of production that have already been proven profitable, thereby bringing every resource closer to full employment, locally understood. (Discoordination is precisely lack of full employment of all resources directed by all entrepreneurs, but only *as far as our arbitrageurs can tell*.) They are attracted to the showing of profits by others as bugs are to the light, almost instinctively. On the other hand, efficiency is very relative. It is precisely novel, intelligent, and disequilibrating human actions that make previously efficient manners of living and doing business obsolete and manifestly *in*efficient and open the door to possibilities that no one ever considered. At the same time, a disequilibrator can err, thereby failing to increase global happiness. The market quickly punishes such a bumbler, and it is in these things in which it is efficient in the second sense. The market is efficient because it (and only it) harmonizes individual creative initiative and the common good.

Consider that neoclassical economics assumes that firms maximize profits. What can possibly be meant by this, when this school is preoccupied with the state of equilibrium in which there are no profits? Again the distinction between psychic and monetary profit is relevant. When a farmer exchanges cows for horses until it is no longer profitable to trade a marginal cow for a marginal horse, every cow and horse are put to their most valued uses as subjectively determined by the parties to the exchange. *Psychic* profits of *workers* are maximized precisely at the point where the *monetary* profits of *entrepreneurs* are zero. This is one sense of efficiency. Another sense is evoked by a barroom brawl: in a free-for-all "anarchic production," the objective is to inflict maximum damage on others while receiving minimum damage oneself. That person is efficient who knocks out the most teeth or more pertinently makes the most money, perhaps at the expense of others. Fighters, too, can be more or less efficient.

This dichotomy has often been misinterpreted (1) in the business world as that there is a limited "pie" over which people fight to the death. It is true that the money supply (under laissez faire) is highly inelastic, and one man's profit in terms of *money* entails another man's loss. However, that does not mean that the "pie" in terms of consumer and capital *goods* per capita and therefore general welfare do not increase precisely as a consequence of entrepreneurial competition. Entrepreneurs are recruited into the service to society through the cunning of the economists. It has been misinterpreted (2) in economic science as the purpose of economics: to shove resources to where they appear *to the economist* to be most wanted. This neglects the fact that people constantly find new and better uses for things, uses that surely stupefy our generic economist. Economists find themselves perpetually flabbergasted by the fact that entrepreneurs escape the straitjacket of boring equilibrating economizing. Even an economist can in theory

equilibrate profitably for society; only an entrepreneur can disequilibrate profitably for himself.

The idea behind the neoclassical Kaldor-Hicks "efficiency" is simply obscene. As an imaginary construction, it is amusing. In the real world, however, there are no compensations from winners to losers. A person who invents and markets a better mousetrap has no duty to share his profits with his competitors. There is no flood of lawsuits from people who have been made "worse off" by some change to claim their rightful property from the more successful. It is not the judges who allocate income to entrepreneurs but the consumers. Now perhaps it might be objected that such ought not to be the case. But the ES + IXP moves described in the previous chapter and the cash flows in the economy require that for every winner there be losers, either workers or other entrepreneurs. A law stipulating that compensation be paid to the losers abolishes human action as such. Economists must deal with rules not acts. Their welfare economics or ethical outlook is passive utilitarianism. Is it a happy society in which entrepreneurs are allowed to innovate and imitate in many various ways and profit from their troubles? Economists cannot say that this is Ok for Smith yet bad for Jones. They must, by answering this question, lay down a definitive praxeological and then positive law. Kaldor-Hicks efficiency may be relevant for firm governance (in which case it seems trivial: of course funding should be shifted from department *A* to department *B* within a company if *B* is expected to bring in higher revenues, as per the ASB move discussed above) but has many fewer applications in a capitalist economy.

Equilibration for supply and demand features *Pareto* efficiency: the closer the price is to the equilibrium; the more mutually beneficial exchanges will be made. Arbitraging away profits is *optimizing* efficiency. Eliminating losses is *harmonizing* efficiency. Finally, making profits is efficiency at *winning*.

The key point is that these senses of efficiency are attached to entrepreneurship, that is, to the market process. They are properties of *something moving* or *changing* – in fact, *developing*, not of any static and unreachable general equilibrium. For example, Schumpeter (2008) is at pains to declare that the procedure of taking a point in time in this process and judging the competitive state of some industry or slice of the market at it is completely invalid. Rothbard (2004) points out even more radically that a mere observation that right now a widget sells for $5 is not sufficient to determine whether this market price is a monopoly price, competitive price, or something in between. One must observe the market process work for a period of time, and if one actually does that, then, Schumpeter implores, he will likely come away with very different conclusions about the market's efficiency. Efficiency

measures the gracefulness, vigor, and dexterity of both sexes, and the rate of development fueled by their intercourse.

The yin and yang of creative advance are best fully enabled and well balanced. This balance is not the "static" balance within a supply and demand equilibrium, nor the "mechanical" balance within an evenly rotating economy, but the dynamic "living" balance between the equilibrating and disequilibrating forces within a real economy. In creating profits and jobs, the disequilibrating yang butchers the deer-in-the-headlights even rotators; in destroying profits, the equilibrating yin like some bloodthirsty goddess Kali (remember that the female archetype is both receptive and destructive in its various guises: e.g., if you do not take the opportunity to plant your crops in the summer when nature is pliable, the same nature will starve and kill you in the winter) creates new opportunities for growth; both benefit the economy as a whole. Yin and yang, in joining together, produce fruit, in this case economic progress. Under unhampered capitalism, *society tends to become more ideal in the most efficient ways possible*.

13. That prudence and courage drive human actions

An entrepreneur has before him an array of prices of potential factors of production. In this he is different from a central planner of a socialist economy who does not have access to such prices. (This is because prices arise out of interpersonal exchange, and the single socialist firm cannot exchange with itself.) The entrepreneur has to project or predict only the prices of finished products (from the point of view of the firm producing them). Before beginning each round of production, the costs and benefits of evenly rotating are evaluated anew. Numerous things can cause a businessman to rein in or shut down the production of a particular article: changes in wages, rents, and interest rates; changes in government policy, behavior of competitors, behavior of suppliers, and general economic conditions; changes in consumer tastes. However, to the extent that these can be predicted, the businessman gets a leg up: he can with some assurance stay in business for longer than a single round of production.

It is certainly true that human sagacity and predictive powers are limited. But they are not nugatory either. Suppose that some person, Smith, has invested his life, fortune, and sacred honor in some enterprise. Then *prudence,* which is also called practical wisdom, will allow him precisely to calculate the danger or risk he is facing and determine whether he can overcome the odds. Given these calculations, he need not hesitate. Either he determines that he will succeed, perhaps with high probability, or he decides that the risk is unacceptable and

refrains from acting. In either case, Smith stands in no need of battling any possibly paralyzing feelings of dread or apprehension inside him. This is because, again, the outcome or the relevant odds are known beforehand, and therefore Smith will either execute his plan and reach fruition with a definite probability or decide against doing so and retain his starting capital. Either way, Smith can calmly make a *rational decision*, that is, a decision supported by more or less exact calculations of the consequences of his actions for an arbitrary number of people and lying arbitrarily far in the future.

Fortitude, on the other hand, is a character trait that defies all calculations. It is essential when dealing with *momentary surprises*, when one does not know how things will turn out. Continuing the discussion in ethical terms which seem apropos here, fortitude, therefore, is a profoundly entrepreneurial virtue. It lets a person go through with a plan of action when he is not sure of his chances of success. It lets him overcome the fear he may be suffering of obstacles of whose existence and difficulty he is as yet unaware or aware only vaguely. Fortitude is required when facing the unknown and unpredictable, precisely when prudence is helpless. St. Thomas indicates that fortitude "deals chiefly with sudden occurrences" (*ST*: II-II, 123, 9) and, insofar as he connects magnanimity and magnificence to fortitude, is often about "goods of fortune" (129, 8; 134, 3). When one is in danger and uncertain of whether he can overcome it and fearful, with *courage* (a close relative of fortitude) he can nevertheless achieve victory. Courage and tactical intelligence can ensure triumph when all strategic calculations predict disaster. Keynes insists on the distinction: contrasting "short-term" speculation with long-term "enterprise," he writes that

> enterprise which depends on hopes stretching into the future benefits the community as a whole. But individual initiative will only be adequate when reasonable calculation is supplemented and supported by animal spirits, so that the thought of ultimate loss which often overtakes pioneers, as experience undoubtedly tells us and them, is put aside as a healthy man puts aside the expectation of death. (*GT*: 162)

Prudence and courage complement each other in all human actions. One may think of prudence as the virtue that helps one to achieve a well-defined goal. Whatever obstacles stand in the way, they are cleverly surmounted. Every milestone is dutifully reached. No matter what contingencies occur, they have been anticipated and planned for; the end is kept clearly in mind with eyes, as it were, on the prize; and every hindrance is brushed away, overcome, perhaps, with great ingenuity. Technical problems get solved one by one, relentlessly, resolutely, with iron self-control and willpower, and removed from the

path to success the key to which is faithful no-improvisations-allowed following a perfectly conceived plan. One is on his own, autonomous, manipulating the world with wizard-like competence and cold control over the elements.

Fortitude, on the other hand, concerns victory over one's competitors. There is no specific end to be attained, instead the end depends on what other people do and how one will react to their actions in order to counter them, obtain an edge, and dominate the situation. What goal is had in mind changes all the time, depending on how the competitors position themselves. The key is to adapt to a constantly changing environment, to seize every opportunity presented by the opponents' mistakes. There is no inexorable march toward a goal far in the future but deft maneuvering, veering back and forth gracefully and artistically so as not to destroy obstacles but to avoid and evade them. It is as if one is engaged in a boxing match: the key is to best the other player who in turn is trying to best oneself. Far from being autonomous and self-sufficient, one is constantly measuring himself against other people. Visionary thinking and planning for the long term give way to opportunistic and agile negotiating whatever the world throws at one in the next moment.

Courage is a "hot" virtue, the opposite of self-control, in that one must free his creativity from all inhibitions and hang-ups. A man whose chief virtue is courage aspires to be a virtuoso tactician, a master of technique and style. While prudence eliminates chance and the unforeseen or tries to, fortitude revels in them and seeks to take advantage of them, shrugging off and even conquering the slings and arrows of outrageous fortune. Prudence is the art of avoiding lemons in the first place; fortitude is the art of turning them into lemonade. Marshall (1890) summarizes the entrepreneurial imperative as that one "must be able to judge cautiously and undertake risks boldly" (359).

The weakness of the strategic intellect is that the goal is relative to one's own power and may be trivial and nothing special if many other people achieve similar or greater things. One needs to see what others have done in order to form a true opinion of himself. The weakness of the tactical intellect is that one can be a champion but really a big fish in a small pond, yet he does not realize this because he is seemingly king of his world. One has to look inside himself and orient the goal away from beating ineffectual unworthy opponents to finding the limits of his own strength, regardless of which other people he is better than. A man who is foolhardy will "fail," as to achieve his end; a man who is cowardly will "lose," as to other people, his competitors.

It is of course not the case that competition must arouse in one feelings of hatred or envy or contempt for one's rivals. A contest can be a form of communion which drives the participants to excel. All great

entrepreneurs, like all great athletes, display a profound sense of good sportsmanship. Market competition often brings the best out of people. Erikson (1980) points out that "a combination of early prevention and alleviation of hatred and guilt in the growing being, and the consequent handling of hatred in the free collaboration of people who feel *equal in worth although different in kind or function or age*, permits a peaceful cultivation of initiative, a truly free sense of enterprise" (86, emphasis added). The economic analogy is that in the perpetual market conflict between established companies and newcomers eager to challenge them, neither the "old" nor the "young" must be privileged by the state with subsidies, monopoly grants, favorable regulation, protectionism, credit expansion, or any of the rest of the economic monstrosities. Free competition that actuates the market process is both a means to prosperity, a legal ideal, and an individual virtue insofar as business owners voluntarily abstain from corrupting the legislators, even when they feel they might succeed at something so seedy.

At the same time it should be noted that most investment is undertaken not from high and wild animal spirits but as dutiful reinvestment of present sales revenues into the next round of production. Though there is no necessity in the latter, and all decisions to invest how much into what remain under each entrepreneur's control, still changes are marginal, and each business retains most of its essence from one production period to the next. Therefore, it is not true that investment, unlike consumption, is especially volatile. (Of course, innovations and creative advance in general will be perpetually changing the value of existing capital. The "marginal efficiency" of various capital goods does fluctuate. But that is no reason for *unemployment*.) This point also shows that it is not "investment" but the relation between labor supply and demand that determines employment. Investment takes care of itself.

Keynes argues that with the equation of exchange, $MV = PQ$, given that the money supply is fixed by the authority and sticky prices at least in the short run, changes in V actuated by unstable investment affect output, Q (see Garrison 1996). A decrease in "buying" or aggregate demand MV relative to "selling" or aggregate supply PQ brings about a decline in output and employment. But how does it work? Do masses of investors periodically liquidate physical equipment and entire factories solely because they come to be gripped with irrational fear and hanker for the security of cash? Do they suddenly come to worship the "fetish of liquidity" so much that they want to shut down production? (And if they did shut it down, (1) physical capital would have to be sold first, so it would not be destroyed, merely reallocated; (2) why assume that they would hoard the money rather than consume it, restoring the demand?) If the explanation of business

fluctuations is that "people are crazy," why are they sane enough to produce at all? Why isn't there a war of all against all? Why are humans seemingly competent enough to survive to adulthood? Irrational people die without leaving any descendants; they also lose their money in the market and become unable to influence it further. No, insanity is unprofitable, mass insanity even more so, and cannot account for slumps.

The tendency of the universe to throw surprises at a person may be called part of the "human condition." But it is not the case that human beings as a species were thrown into a world in which such surprises were already present. It is precisely the planning and acting of *other people* that make the world surprising for any particular individual. Events can, therefore, be divided into three categories: (1) actually known; (2) potentially known but actually unknown because of the complexity of the situation or some actual limitation on human predictive powers; and (3) surprising due to creative human action. The difference between strategy and tactics is that strategy is the method used to minimize risk by dealing with (2); and tactical expertise is how one counters ambushes and defeats the enemies who lay them under (3).

Uncertainty of the future arises out of a combination of (2) and (3). The most crucial reason why Smith's future is uncertain is that Jones and Robinson and billions of other human beings are present in his environment, acting of their own accord. Uncomprehending, Robert Skidelsky (2010) writes: "If… there is bound to be irreducible uncertainty in financial operations, the state has an additional duty, which is to protect society as a whole against the consequences of bets which go wrong." (170) How tasteless. Uncertainty is a metaphysical feature of the world, up there with scarcity and sin. If the state has a duty, then it is not to lower uncertainty (how? by liquidating everyone except Skidelsky? with autarky at the level of individuals, destroying the division of labor? with socialism?) but to protect the property rights of the *customers* of financial institutions which are violated in the process of fractional-reserve banking. Our economic woes are due to government and central bank activism, not to the human pursuit of happiness. This pursuit does need to be coordinated, but that can only be done via unfettered laissez faire. If we attribute the uncertainty felt by any man to the future actions and reactions of all other men around him, then we can see that it's not the case that "money enormously enlarges the deleterious power of uncertainty" (Davidson 1978: 30). It's people who create trouble for each other, not mere tools like money.

By "surprise" I mean not any sort of marveling at an improbable event but contending with a countermove by a *human* rival that one has not anticipated or at least thought unlikely enough to plan for. It's not enough to avoid surprises to think "Something I know not what will

happen"; one must predict exactly what will happen and take measures to profit from this event (since prediction without action is economically irrelevant).

Entrepreneurial competition and the uncertainty it generates therefore have a prosocial essence and an anti-individual accident. The former is that it permits and in fact causes creative advance thanks to the winners in the competition. The latter is that some entrepreneurs suffer losses. The benefits, however, normally (such as without the business cycle) far exceed the costs.

On the one hand, the entrepreneur's intellect is exercised in detecting an opportunity generally: such and such factors are undervalued, such and such product that can be created with the help of those factors can be sold at a profit. And the entrepreneur's power is exercised in a certain self-confidence to initiate the investment, "to ignore conventional wisdom, to dismiss the jeers of those deriding what they see as the self-deluded visionary" (Kirzner 2000: 248), to muster the courage perhaps to quit his secure well-paying job, etc. On the other hand, the entrepreneur's intellect must develop a particular and detailed plan of production, both technological and managerial. And his power is used to alter and improve the plan even as production is going on in response to the actions of other entrepreneurs as they change the market in the meantime every single day. You can't say, "If I execute my plan perfectly, I'll definitely succeed, and if I mess up, I'll probably fail." In fact, there is no such thing as "the" plan to be executed, whether perfectly or not. Plans do and must change as new data are revealed in the marketplace. If you execute "the" plan perfectly, you'll in fact probably lose; it is smart adjustment of the plan itself that is key to flawless execution. (That's not to deny the importance of a measure of fortune or luck that must be mixed with these kinds of skills.)

Kirzner replies to the objection that his entrepreneur cannot suffer losses by saying that one who perceives a genuine opportunity profits, while he who is deluded and sees what is not there incurs losses. This is true, but there is a psychological issue here: a man cannot be considered an entrepreneur simply by virtue of expressing an opinion about the future state of the market. He must have skin in the game: he must demonstrate that he really takes his own opinion seriously by risking his own money. Any pretender can flap his tongue freely, but an entrepreneur puts his money where his mouth is. If it weren't for risk and uncertainty, it would be much easier to separate asset ownership from the entrepreneurial function. Any opportunity one perceived would be true. One could then hire every resource, including the CEO, on borrowed money, produce output, sell it, repay the debt, and pocket the profits. But in an uncertain world it becomes possible to execute poorly and lose money. The entrepreneur cannot be so light and carefree as

Kirzner pictures him. He is responsible for his starting capital, or at least the lender is.

Entrepreneurial ability is not a form of human capital. Most of it, beyond basic skills and prudence and courage, can I think be folded simply into burning ambition, and where there is a will, there is a way. There must be perhaps a certain faith that one is loved by the gods and hope for a bright future. Such an ability cannot be traded on the market: a man who buys the alleged services of an entrepreneur by this fact himself becomes an entrepreneur and the man bought becomes a mere manager or worker.

Another crucial distinction is that between knowledge and understanding. While knowledge – also called "science" in older philosophy – is the first of the three intellectual virtues and describes the causes and effects to which *physical* entities are subject, understanding is traditionally the second such virtue and is used specifically in dealings with rational beings. The way to grasp human actions, whether past or future, is by means of understanding.

Understanding can be elucidated in terms of the distinction between class and case probability. (See Mises 1996: 106-15.) The former is amenable to mathematical analysis. If there are in an urn 10 balls, 3 of which are red, and the others are blue, then the probability of taking a red ball out of the urn is 0.3.

To assess case probability, one must consider the various human interests involved and estimate their relevance, strength, and direction, often on a hunch. E.g., how important to the Republican gain of the House in the 2010 election was the passage of the Democrat-sponsored health care legislation? Then one must sum them up in order to reach a conclusion. For case probability, one can form *opinions about the course of future events* and defend those opinions by adducing *reasons* for them. For class probability, any "opinion" will be merely a restatement of the value of the event's numerical probability.

Class probabilities cannot be assigned to human events at all; even betting that, say, the Republicans would gain the House before the election is *unfitting*. Smith might think it likely; Jones, unlikely; but the actual odds (such as 9:1 in favor) cannot be determined. Class probability is determined by dividing the number of favorable outcomes (FO) by the number of all possible outcomes (AO). But people choose to act by considering reasons for their actions. When contemplating decisions, people do not conceive of several courses of action and pick one randomly. These decisions are not *FO* vs. *AO* but *pros* vs. *cons*. Moreover, each human choice is a unique nonrepeatable event because the valuations, plans, and powers of the chooser change precisely as a result of the choices made. Every experiment is, in Shackle's (1955) terms, "crucial." That is why there are not even relative frequencies of

actions and no mechanical experimentation with the market that yield reliable probabilities. If one could know Smith and his reasons inside and out, then one could foretell his choice, eliminating *risk*. If one could know how Smith would change with time, then one could avoid *surprises* from him.

This lack of definite knowledge about the evolution of humanity, such as, as Keynes (1937) put it, "the prospect of a European war…, or the price of copper and the rate of interest 20 years hence, or the obsolescence of a new invention, or the position of private wealth owners in the social system in 1970" (214), is called uncertainty. Uncertainty regards only those expectations capable of guiding action. An expectation like "the price of copper 20 years from now will be between 1¢ and $1 million per ton," though not uncertain, is useless.[10]

Prudence requires both physical causality provided by knowledge and teleology provided by understanding. One *understands* human actions; since present understanding, no matter how deep, does not allow perfect prediction of future human actions, these actions create a *surprising* world; and one must be *courageous*, as well as adaptable, confident, quick-witted, and in possession of presence of mind, in order not to be dismayed by any sudden development, come what may. If it is an opportunity, then one must seize it before others catch on; if it is a disaster, then one must minimize the damage and turn things around ASAP. Regarding knowledge, one may know something with 100% certainty or be completely ignorant. In between there are probabilities. Persons who count on their power to estimate probabilities accurately and use them in their favor to obtain profits are called *gamblers*. Regarding understanding, things are analogous yet different. One either understands another human being very well and can surmise his next moves or that other person is a complete stranger. In between there is "discernment of spirits," insight into another's soul, his character, motivations, aptitude, etc. Whenever one is counting on his spiritual insight to guide him toward profits, whatever he is doing, it cannot be called gambling. One who counts *in addition* on his emotional intelligence and acuity to help him deal with his customers and beat his rivals is not a gambler but an *entrepreneur*. There can be no probabilistic calculus in purely human affairs. Now it will immediately be pointed out that an entrepreneur performs a social function: he rearranges production in such a way as to improve consumer well-being. That is correct, but in order to do that, the entrepreneur must have precisely insight into the moods and mental states of both his customers and his competitors. It is his deep understanding that makes an entrepreneur successful and a servant to the people at the same time.

We can see that speculation on the stock market and suchlike can in no wise be called gambling but must rather be labeled

entrepreneurship. Entrepreneurs then can be defined as those (1) who seek to understand their customers and produce goods that will satisfy them and (2) whose endeavors to do so can be endangered and frustrated, during the time it takes for them to complete production, by the actions of other entrepreneurs. Each individual actor then is a source of uncertainty for all other actors. Uncertainty is at the same time both a hindrance to entrepreneurship (I don't know what other people are plotting and doing in the future) and its enabler (they don't know what I am plotting and doing, either). Uncertainty generated by unpredictable physical causes, such as fires and floods, can be insured against; uncertainty generated by other people's pursuit of happiness cannot be.

While it's true that the future does not exist, it can be known, or predicted, nonetheless. I predict that if I let go of the pen, it will fall on the floor, and I'm right about it. I predict that you will have dinner tomorrow, and that's plausible enough. But it is much harder to predict the actions of people, specifically one's competitors, who are aiming precisely to be unpredictable.

If I can to an extent predict the future in the sense of "If I do *X*, then *Y* will happen," then I can use my foresight for my own profit. Different entrepreneurs differ as to their powers of prediction, and that is one of the facts that generates both winners and losers in the marketplace. Uncertainty as such therefore does not hinder successful action, only relative ignorance does. It was a major error on the part of Keynes not to realize this. Mises argued that "rationality" with regard to *ends* is purposiveness: conscious striving for goals. This is debatable insofar as ends can be good or evil, and rationality can be identified with the good. What is rationality as applied to *means*? Is it efficiency, using "the best" means for a task? I like Kirzner's idea that rationality is a species of intelligence which itself is ability to learn. Humans then are not perfectly rational, indeed they are often quite irrational. But they do learn, some better than others, are rational to that extent, and as a result the economy displays a measure of orderliness and is subject to definite regularities or laws. Contra Keynes, investors are rational in two senses: they learn new things, and some investors learn better, and so are *more* rational, than others.

Again, humans are rational, and they have expectations about the future, but there are no such things as rational expectations in the absolute sense. Rather, some people's expectations will be more rational than others'. Relatively more rational people will profit, relatively less rational will incur losses. The state of equilibrium by definition precludes the existence of purely private information, some knowledge had by one entrepreneur that is temporarily unavailable to all others. For example, "technology" is not merely a generalized economic parameter. There are trade secrets, carefully guarded fruits of private

research and development, patents, non-compete employment clauses. Equilibrium also flattens the individual personalities by ignoring the fact that people will judge (through understanding) the same data differently and execute their plans with different competence. There everyone is equally, and maximally, "rational." Clearly, this assumption does not hold in the real economy.

Where neoclassicals assume perfect rationality, behavioral economics studies people's "irrationality." This is hopeless. A person who fails at something is not doomed for all eternity, he can learn and improve. Of course, so can his competitors, so the only useful sense of irrational behavior in economics is loss in business. Behavioral economics could be a contribution to pedagogy, but its practical fruit appears to be techniques for use by the smarter fellows to manipulate and exploit the dumber ones, i.e., con artistry.

I found Leijonhufvud's (1968) book obscure, but Littleboy (1990) provides a comprehensible summary. The trouble for him appears to be "inelastic expectations" that disrupt price coordination within the market. Things change, but people mistakenly and inexplicably believe they'll get back to what they were. Hence, according to a circuitous story, inefficiencies and unemployment.[11] But expectations are not "elastic" or "inelastic"; they are rational, though in the different from the foregoing sense of *aiming at the truth*. They are intelligent, and if not especially intelligent, then at least tend to show improvement with time and experience. Leijonhufvud falsely assumes that market coordination depends on perfect rationality, falsely argues that people are in fact obstinate bullheaded idiots, and triumphantly concludes with a market failure. In fact, coordination within the yin-yang market process requires only the incentive to learn, to enhance the knowledge that helps one to succeed or profit.

Not all people then are equally "rational," but neither are they, such as in their capacity as investors, equally irrational as Keynes would have it.

It is clear that uncertainty is an essential feature of the market economy and is largely absent from socialism under which only the dictator acts while everyone else is just a means to his ends. Somehow Keynes believed that the capitalist uncertainty decreased investment and therefore the capital stock below optimal or below "full." Stock market fluctuations deterred people from investing as much as would be invested if the state were to take over. Keynes was in favor of socialism because he imagined that the central planners would not need to worry about losses and could therefore invest with perfect confidence. Or perhaps he noticed that the government, having the power to raise revenue by coercive taxation or by inflation, and thus being "too big to fail," enjoys the cheapest interest rates when it borrows. If *only* the

government could borrow and invest, he reasoned, the (sole remaining) interest rate would be lowest. There would be no "lender's risk." It's true that, for example, when banks lend money, they pool risks and charge extra to make up for those entrepreneurs who will end up bankrupt. That's a cost of doing business. But to seek to lower this cost by destroying capitalism surely is unhelpful.

Given that uncertainty is a cause and consequence of human actions and a background condition of the economy, no particular business cycle theory follows from it. But because Keynes believed there was a connection, he felt that the substitution of government for private investing would be stabilizing.

Chick (1983) mentions the following interpretation: "if only producers knew that consumption would rise if they offered more jobs, the full-employment position could be reached." Unemployment then is "due to lack of information, based on uncertainty about consumers' intentions" (111). Perhaps she means that this is a case of positive externalities that we wish could be realized if only human selfishness did not interfere. It's true that producers do not act collectively and do not aim at full employment. They are not any sort of public servants who extend jobs and pay wages so that their employees could consume other firms' products. One does not hire workers in order to stimulate aggregate demand but to obtain his own profits. But it's not the case that they do not invest because they are afraid of what's going to happen to "consumption." It's true that consumers' intentions are hard to read. But that is a cause of business losses, not unemployment. The consumers will choose among the goods offered to them for sale by the entrepreneurs. Absent errors, they will buy up everything that's being sold, thereby granting the entrepreneurs the funds to finance the next round of production and to maintain employment.

It's true that offers of employment depend on profit *expectations*, but in equilibrium there are neither profits nor expectations yet full employment nonetheless. And much of the real economy at any time evenly rotates also, with novel investments happening on the edge, so employment is maintained on inertia.

How many entrepreneurs do "we" need? Even Crusoe risks that his preferences will change, or that he will find a superior tool that will give him a reason to abandon production in midstream; every entrepreneur risks that he will be outdone in ways he cannot at the moment fathom. But given large markets, there is room in the world for more than one entrepreneur, even though all markets are connected. Rothbard (2004) suggested that the socialist computation problem limits the size of the firm: too big a company will have trouble deciding to which projects it should allocate which resources, putting it at a competitive disadvantage relative to smaller concerns. (613-4) Though

all new entrepreneurs compete not only with established businesses but also amongst themselves, numerous disequilibrating entrepreneurs can succeed at the expense of many even rotators. But "too many" entrepreneurs with "too few" capital goods to make all their plans viable, which is a situation that is begotten during a business cycle, as we will see later, spells trouble.

If we want, we may incorporate luck or serendipity into this schema, as well. An entrepreneur looks here, then looks under there, and perhaps stumbles upon something useful. But even in this case those people tend to be lucky who know where and how to look. Skill and luck for acting men are intertwined inextricably. Luck favors the prepared including the skillful.

Remember our four ways of disrupting an ERE with creative advance. One can (1) manage better; (2) use a superior technology; (3) come up with a more satisfying product; or (4) make an old product more appealing through advertising and suchlike. There are other causes of profit. Lower costs of production can be achieved also by means of cheapening of machines, raw materials, and human capital that enter into production by existing methods. Demand can be stimulated by breaking into new markets with the old product, e.g., by establishing offices and factories in other countries. What happens when an entrepreneur disturbs in one of these ways not an evenly rotating economy but a previously discoordinated system? If yang is in ascendance, that is, if there are too many disequilibrators, then too many surprising things are all happening at the same time. As a result, innovating or contributing to creative advance is not necessarily the smartest thing to do since one's own product will be competing with a lot of other people's inventions. It is inevitable that many innovators will make mistakes. Pushing yang is subject to diminishing returns. On the other hand, imitating or helping oneself to other people's monopoly profits seems like a natural choice and is profitable. If yin is in ascendance, that is, the closer an economic system is to an ERE and the less lucky and shrewd other people are, the greater the opportunities for profit. This is because an ERE signifies absence of surprises which means that the spineless multitude of even rotators will fall easily. Innovation is lucrative which means that yang flares up naturally, while there are increasingly fewer entrepreneurs left to imitate: there are diminishing returns to greater dominance of yin. A balance is thus struck between the coordinating and discoordinating forces.

The business cycle breaks this balance radically because during its boom segment there occurs *destructive disequilibration* which leads to far greater discoordination than the economy can handle adequately.

The yin/yang duality under analysis here is essentially catallactic in scope or limited to the operation of the market. We must be careful

not to confuse it with other, true or merely apparent, complementarities in nature. For example, it is only with heroic effort that we can conclude that the two major parties in the United States "balance each other." The "Daddy party" and "Mommy party" who supposedly take care of the children-citizens do not make up a national family. The welfare-warfare state is not a happy political union. Neither are there any yin and yang in government interventionism: the "Third Way" between capitalism and socialism, marked by "public-private partnerships," a vast number of regulations, and other horrors, is not in any sense a golden mean or complementary opposites completing each other.

It may be asked both, ethically, (1) how profits can be justified and (2) how disappearance of profits via equilibrating entrepreneurship can be justified. (1) Profits and losses arise as a result of entrepreneurial competition. Some win, others lose. Therefore, it is this competition that needs to be justified in the first place. But doing *that* is easy: society craves catallactic competition because this is the only way rationally to bring about both incremental and revolutionary improvements in consumer welfare. If it is suggested that entrepreneurs are duty-bound to give away their profits to the factors in their employ without waiting for equilibrators to arbitrage away these profits, then my reply is (a) that this is markedly unfair: if Smith loses, then he loses; if he wins, then he merely breaks even; and (b) that this will destroy the economy, based as it is on self-interested human search for happiness. (An employee who requests "profit sharing" from his boss can be rebuked with a simple "You can share the profits only if you agree to share the losses, as well.")

In addition, successful entrepreneurs, like artists, *make the world more beautiful* and deserve to be compensated for that. This point impinges on some economists' misguided talk about "impersonal market forces." There are three ways of interpreting this idea. First, that the market does not *respect persons*. In buying from Smith, I do not care who Smith is, what kind of person he is. He may be a saint, but if Jones the sinner offers me a better deal, then I will buy from him. In this sense the market may be called impersonal because it assists humans in their search for narrow happiness rather than search for virtue. (On the other hand, family and even local community respect persons intensely. If John is your child, then he is not interchangeable with any other child. Same with Smith who is your friend and Jones who is your neighbor such that perhaps your and Jones' children play together.) Second, that the market is "automatic." This conflates physical causation with teleological causation. Mises (1996) points out that in the market, "there is no automatism; there are only men consciously and deliberately aiming at ends chosen. There are no mysterious mechanical forces; there is only the human will to remove uneasiness. There is no anonymity;

there is I and you and Bill and Joe and all the rest. And each of us is both a producer and a consumer." (315) Neither individuals nor the market as a whole is a machine. The regularities and economic laws of the market process arise due to human actions not robotic actions. There are manifest consequences of the fact that human beings make choices, but the science that studies such consequences, praxeology, is distinct from physics. Teleological causes produce definite effects, but they do so in ways that are different from the operation of a mechanical device. Even pure equilibration is merely *predictable*, not automatic: *people* equilibrate by purposely over- and underbidding each other. Third, that not only the abstract laws of functioning of the market process but also its concrete content is impersonal. This is not so; it is men who build civilizations, and their individual personalities are crucial and indispensable to the art they create. The market is not impersonal in the latter two senses.

(2) The claim that the process of arbitraging away of profits is just is not self-evident: e.g., defenders of intellectual property laws insist that imitation of patented or copyrighted ideas ought to be explicitly outlawed. Normally, however, justifying imitation is simple enough: it leads the economy toward local perfection (on a higher global level) and is to that extent good.

14. Prudence and courage, cont.

In one sentence, Schumpeter (2008) presents an intriguing scenario: "A firm specializing in paper labels for beer bottles may be so circumstanced – potential competitors realizing that what seem to be good profits would be immediately destroyed by their entering the field – that it can move at pleasure on a moderate but still finite stretch of the demand curve, at least until the metal label smashes that demand curve to pieces." (102)

We have that Jones might think it a great idea to arbitrage away Smith's profits, but he figures that as he will be entering the paper labels industry, others will do likewise, and he will not gain anything. Surely, however, such thinking is self-defeating if *everyone* engages in it. I have defined an entrepreneur as fundamentally someone who faces competition or threat thereof and therefore surprises seven days a week. It may seem, however, that equilibrating entrepreneurship garners certain profits: is it not obvious exactly what an entrepreneur needs to do in order to copy another? The answer is that surprises for equilibrators lie not in the fact that by selling the same product for less they will not definitely get consumer attention – that they will is quite certain indeed or rather *riskless* – but in how fast each of them can notice and act on an arbitrage opportunity before (a) the rest of the

horde of wannabe imitators barge in and (b) the firm being imitated in its turn makes a new and unexpected move. In bringing bottled water to a disaster area and making a tidy sum, one is still counting on his superior foresight (prudence) and quickness (courage), and he may well be wrong or slow. Thus, equilibrators are true entrepreneurs after all. Shackle (1982) objects: "the elemental core of Keynes's conception of economic society is uncertain expectation, and uncertain expectation is wholly incompatible and in conflict with the notion of equilibrium" (438). Equilibration will occur whether or not a particular equilibrator is outdone by his fellows. "Routine" equilibrators, unlike "creative" disequilibrators, are all traveling to the same place, and it doesn't matter which one of them gets there first.

A reason for price stickiness in a certain industry may be fast-paced innovation and quality competition. In such a case, equilibrating tendencies have little time to work themselves out. The moment someone thinks about duplicating some consumer electronic device and selling it for less, the device mutates into a superior form. Though each such transformation is disequilibrating, having tempted the entrepreneur with a possibility of evanescent profits, it also equilibrates virtually, destroying old technologies and ruining the prospects of those companies that display less inventiveness. Discoordination is not thereby increased but is merely reinforced or thrown back to the same level again and again, even as pure equilibrators try franticly to orient themselves.

Schumpeter even speculates that a market leader enjoying a temporary advantage by virtue of a superior product or production method may be, for psychological reasons, in a better position to innovate *still further* than a firm laboring under perfect competition in an ERE. "Perfect competition is not only impossible but inferior and has no title to being set up as a model of ideal efficiency." (106) Hayek (1948) calls the consequences of the preoccupation with perfect competition "antisocial" (102). Even Marshall (1890) argues that it is not the case that "the amount produced under a monopoly is always less and its price to the consumer always higher than if there were no monopoly" (463).

The neoclassical ergodic assumption of their models to the effect that the future is predictable and can be found out by means of statistical analysis of the past is judged outrageous upon even mild reflection. It is true that trends can sometimes be discerned in a society, but trends do not last, and neither do the predictions of even the most sophisticated models. In order to realize the impotence of the fully mechanical view of human beings used in computer modeling, it is enough to ask whether a model can predict which consumer good will hit the market next, which new technology will find itself into the halls

of factories and offices, or whether it can predict a political revolution like the fall of the Soviet Union or the Republican revolution of 1994.

The established routine of production and consumption has some claim on the world, but any entrepreneurial novelty-generating action deviates from such a routine, which is why the further into the future a model pretends to look, the more erroneous it will be. The market is ceaseless agitation of its every participant aimed at improving his well-being. The future cannot be like the past because it is the intention of every human being for the future to be better, as he judges it, than the past. One cannot substitute either entrepreneurship or economic reasoning with number crunching.

Why is that? It is nothing if not empirical to notice that the actual market under "study" is extremely complex. A billion things are happening all at once at any single moment. But perhaps an experiment could be conducted. Very well, what is the general nature of an experiment? A scientist has a process, and he wants to learn something new. He alters a single variable, reruns the slightly modified process, and observes the results. Having done this a number of times in different ways, he is bound to have discovered something. The case against empirical economic theory consists of two observations, both based on the idea, obvious to all but philosophers, that people are not (merely material) things. First, they have *personalities*, those upsetting aspects of humanity that make Smith at time t_1 in set of circumstances C behave differently from Jones at t_1 in C and from Smith himself at t_2. Landsburg (2009), for example, brings up a structural model by James Heckman, a Nobel laureate in economics, which "reckons that $15,000 spent on preschools prevents more crime than $80,000 spent on police departments" (132). Now the gravitational constant in physics assists in the calculation of gravitational effects and has a precise numerical value, specifically $6.67408*10^{-11}$ $m^3kg^{-1}s^{-2}$. It's an aspect of universal laws of nature. But that spending on preschools is exactly 5.3 times more efficient at deterring crime than spending on the police is emphatically not a fundamental constant of any kind. Therefore, any conclusion allegedly arrived at by an empirical economist must also answer three extra questions that need not bother a genuine naturalist: *for whom* did you make your prediction and for that person, *where* and *when*? It would be unhelpful if after a laborious series of experiments, a scientist deduced that only *this* atom or *this* pendulum would have behaved in a certain way and only *then*. For example, people themselves change, sometimes consciously, sometimes not. A person may be animated by a vision of how he wants himself to be. For example, he may strive to become "holy," thereby losing some desires and gaining others. Or, as Cary Grant said explaining his suave magnetic appeal, "I pretended to be somebody I wanted to be, and finally I became that

person." No model can foresee that. Hence empirical economics is only nomically inert economic history.

"The study of history makes a man wise and judicious," says Mises (1996: 30). Why? Becker (1932) quotes an 18th century historian: "We see on the theater of the world a certain number of scenes which succeed each other in endless repetition: where we see the same faults followed regularly by the same misfortunes, we may reasonably think that if we could have known the first, we might have avoided the others. The past should enlighten us on the future: knowledge of history is no more than an anticipated experience." (95) Suppose I say, "I have come to realize that of the sex, drugs, and rock 'n' roll, at least two are overrated." This may be a fine maxim. Nevertheless, that it seems plausible does not absolve any other human being from personally *testing it on himself*.

Second, people are *intelligent* and so *learn* from their mistakes and their successes, ensuring that even in similar situations they will act differently.

Toy experiments designed by some economists to find out how people will respond to incentives suffer from the problem that people will change their behavior or lie in order to look "better" when they know they are being observed. Some people may take being watched so seriously that they will experience stage fright, thus further confusing the experimenters.

Quantitative relationships are economic history unfit for predicting the future with any precision. Even economic history must be enlightened and interpreted by theory, otherwise the data will shed no light on the events which the historian wants to explain. This is because the data must be appropriately selected, and even then multiple and often mutually incompatible accounts may seem to fit it. Conversely, the most economic history can do is illustrate economic theory, itself discovered by a priori reasoning. No theoretical conclusions can be drawn from statistical or econometric analyses.

As a final example, someone once complained to me that it seemed like the moment she started to enjoy some product at the supermarket, it disappeared. The reason for this phenomenon is twofold. First, many people are temperamentally inclined to novelty as such. The routine bores them, and companies cater to that preference, a major source, as already pointed out, of the usual roiling in show business. Second, every entrepreneur Smith who has product *X* out realizes that other entrepreneurs are at this very moment inventing ways of beating him in the competition, and they are explicitly taking the present state of the market, including *X*, into consideration. They are planning to put out something that they hope will be superior, from the consumers' point of view, to *X*. Smith cannot reasonably sit there and wait

inevitably to be replaced. He must continuously improve so as himself to surprise his rivals. (Again we see how crucial tactics is to entrepreneurship.)

The temperament theory as developed by Myers and Briggs and later by David Keirsey can illustrate the psychology of the entrepreneur. Keirsey identifies four aspects of personality each of which spans two extremes: Introversive / Extraversive, iNtrospective / Sensing, Tough-minded / Friendly, and Judging / Probing. From these he constructs four major temperaments and sixteen subtypes. It appears that the ancient Greeks who thought that everything in the world was made up of four elements, earth, air, water, and fire were onto something. Thomas Morris (1999) identifies four "dimensions of human experience," moral, spiritual, intellectual, aesthetic, and individuals are born already specialized in one of these four dimensions. The four cardinal virtues provide the substance of each specialization and fit neatly onto each temperament: temperance to SJ Guardian, justice to NF Idealist, prudence to NT Rational, and courage to SP Artisan. The latter two will be our concern.

The Rational temperament excels in active life at making masterful *plans* and needs *autonomy*. The Artisan temperament excels at masterful *execution* and needs *freedom*. For them, there are two distinct kinds of pleasures or optimal experiences. For Rationals, the pleasure is called "success"; for Artisans, it is called in modern psychology "flow" (see Csikszentmihalyi 1990). The former is rooted in a timeless plan, wherein the achievement and profit are contemplated even in midstream, with the costs in the past, and the benefits still in the future. The latter is a self-forgetful activity that is performed and enjoyed for its own sake with no external goal attaching to it, that requires maximum utilization of one's powers, intense concentration, rapt attention to the task at hand, and full self-giving. Flow is the state athletes call "being in the zone." It is a conscious, almost perfectly self-controlled of both one's thoughts and body yet allowing one's training and "muscle memory" to guide action, low anxiety (i.e., fearless) feeling. It is an act of *competent playing*. Sometimes flow takes the form of a calm and dreamlike yet intently focused state. Other times, one is able to act and react lightning fast and make split-second decisions correctly yet often not even remember the details of the performance afterward.

Rationals see the entire algorithm from beginning to end. Artisans live in the moment. An NT person can accuse an SP of not seeing the forest for the trees; a counteraccusation might be that the NT will fold the moment something that he did not anticipate arises and ruins his plans. But a team of NT and SP business leaders together can do wonders.

Artisans and Rationals are actually hostile to each other, they do

not, for example, make a good marriage match. Not all opposites attract. But they are complementary at work due to the distinction between creativity and ingenuity. The essence of the former is *breaking* the rules. The essence of the latter is *discovering more* rules according to which the world works and putting them to use. The Rational motto is: "Nature, in order to be commanded, must be obeyed." The Artisan motto is: "I make my own nature."

For Artisans, the moment lasts forever, so to speak, and they tend to enjoy life to the fullest. But enjoyment of an action requires its mastery. And achieving mastery takes a large amount of practice. That Artisans are mindless "sensation-seekers" is a calumny; they seek joy in perfected activity. The end is pleasure in action, the means is practice. For any temperament, there is motion from what is, such as incompetence, to what ought to be, such as mastery. But here, the means, practice, is simply performance of an action when it is not yet fully mastered. Thus, at the beginning practice is painful because the Artisan often fails. He is clumsy, unartistic, awkward. But as he progresses, even practice becomes pleasurable, insofar as it comes to resemble fully perfected skill. For the Artisan temperament, the distinction between means and ends does not exist; means morph into ends smoothly and imperceptibly.

A Rational person may thus assume that in climbing a mountain, getting to the top is the end, and the efforts and danger and trials and tribulations of getting there are costly means. An Artisan would laugh at this misapprehension. For him, the process of climbing is the end, the fun part, an exercise of graceful power right here, right now; arriving at the top is a disappointing termination of a joyful activity, a rush, an exciting virtuoso performance and expression.

We may think of it this way: every challenge presents one with opportunities for self- and world-making. In doing so, one must pay two kinds of opportunity costs. First, in becoming A and enjoying α, one forgoes becoming B and enjoying β. Second, one forgoes just sitting there and quickly dying, figuring that life is not worth the effort. This latter "death drive," including the disutilities of (a) labor, (b) waiting, and (c) fear of surprises, can be neutralized by means of enjoying the work or "being one" with the work, self-forgetfulness, loss of self-consciousness, and like properties of flow. Work still has disutility: it is a cost to be minimized, but given that, it is joyful. The second opportunity cost need not with proper training be paid at all.

The market utilizes persons of both temperaments wielding their unpredictable yet intelligent entrepreneurial powers in competition with each other. It is true that such competition will make each moment surprising and dumbfounding for all concerned, possibly upsetting their best laid schemes. But it will also determine the fastest way of

enhancing consumer welfare, as everyone tests himself against everyone else. In stressing that the market is a process, I argue that it is in flux, moving from an inferior state to a usually superior one. As we have seen, the only feasible type of socialism is the Cuban kind which aims at the everlasting preservation of an evenly rotating economy. Since life consists in growth and development, socialism is economic death. By making the central planner the *only* man in the nation able to plan and act, it represses in the citizens both their Rational and Artisan virtues.

If not admitting Artisan courage impels the mind toward socialism, then a contrary fallacy might hold it that people are woefully imprudent (or irRational) when it comes to investing. Some economists theorize that like lemmings, people follow each other's lead. Others charge that in the presence of a promising new technology, folks become like maniacal wild men in throes of "irrational exuberance." Such contemptuous views of human nature have little to do with reality. It is true that during the boom phase of the business cycle people seem to abandon common sense, but they can scarcely help it given that the economy is overflowing with cheap credit. An exciting new technology is merely icing on the cake. Normally, however, the market quickly dispatches the "lemmings." A more apt metaphor would be that such investors resemble half-blind rabbits who venture into the forest full of wolves who see the slightest move in the dark. They will never know what hit them, as the more perspicacious fellows leave them utterly confused as to what is going on. Their capital will be lost in foolish projects that would never have attracted the attention of superior entrepreneurs and speculators. In fact, in speculating the greatest error is to do what everyone else is doing. Entrepreneurs are the driving force of the market. They lead, they do not follow. They foresee the future better than their duller fellows and uncover profitable opportunities of which no one is yet aware. Rabbits had better stay in their holes.

Keynes argues that "our basis of knowledge for estimating the yield ten years hence of a railway, a copper mine, a textile factory, the goodwill of a patent medicine, an Atlantic liner, a building in the City of London amounts to little and sometimes to nothing" (*GT*: 149-50). But what matters is not what "we" collectively know as part perhaps of some scientific consensus but how different entrepreneurs differ as to what they individually know or believe they know, their *relative* knowledge. Some may know more than others in which case they can seize an opportunity which others have to their ruin overlooked.

Consider that, stripped of all details, Schumpeter's theory of business cycles centers on a new technology inciting the appearance of numerous entrepreneurs. There is no doubt that this occurs. However, the spread of new entrepreneurs and new production endeavors in the economy coincides with a parallel spread of losses, bankruptcies, and

declining production elsewhere. In all likelihood, the *expectations* of higher profits similarly will be counterbalanced with expectations of losses: most entrepreneurs can smell threat easily. It is true that old businesses may not shut down immediately, being in possession of quasi-rents for capital goods that are owned, specific, and hard to sell, accumulated cash, and access to credit. But these will not last long (e.g., quasi-rents will subside as machines are not maintained, credit will dry up as investors seek higher capital gains with the newcomers), and at any rate losses are seen immediately: first, from the draining of factors, second, by a shift in demand from consumer goods to the capital goods utilizing the new technology. There is no deadly illusion that scores of entrepreneurs can *all* succeed at the same time.

Therefore, Paul Davidson's (2009) belief that the free market "works" only when people are assumed, as per the ergodic hypothesis, to be omniscient is absurd. This hypothesis is indeed a sign of some neoclassical economists' disdain for reality, and defenders of the market have no need to resort to it. They are fully aware that the market does not protect from misfortune, sickness, death, and so forth, and most important, entrepreneurial errors. It is not the case that the market works because all humans employ perfect reasoning. I would argue the opposite: that to err is human, but the free market provides the best and quickest feedback to those who have made mistakes. Hayek (1948) illustrates this point by calling the "true" individualism, "the antirationalistic approach, which regards man not as a highly rational and intelligent but as a very irrational and fallible being, whose individual errors are corrected only in the course of a social process, and which aims at making the best of a very imperfect material" (8-9). In order for there to be society, it is sufficient that people be endowed with ordinary prudence. Superhuman prudence would be useful but is not required. One doesn't need any ergodic hypothesis as Davidson alleges, only old-fashioned economic logic, in order to demonstrate the social viciousness of labor unionism or minimum wage rates. Admitting time, uncertainty, and money need entail not Keynes but Mises. The reason why the economy tends toward equilibrium is not any ergodic assumption but the fact that all human action aims at success, enjoyment, and eradication of action. Equilibrium or contentment or rest is just such an end state of frenetic activity.

In addition, the market does not "solve" "economic problems," let alone "all" economic problems. The free market is a process of entrepreneurial discovery of new sources of profits, competition, and local and global improvement. A "problem" is a thorn in the flesh of an otherwise coherent system. Without the market, there is no system in the first place. One might praise a city ordinance mandating minimally effective procedures for trash disposal in every community for solving

the problem the market lets fall through the cracks, namely, negative externalities to every citizen from garbage that piles up in improper locations. The externality is a tiny flaw in an otherwise fully serviceable process of present production and future improvement in production. Without the market, there is no trash, but only because there are no *goods* that generate trash. There are scarcely *people* who have to dispose of trash because only the market allows the human population to grow exponentially.

The market is not even a "system," as if it could be tinkered with at the economist's will, but an organism, a living process of social cooperation. We either have the whole thing or nothing at all. A market sickened with government interventions eventually dies. Davidson makes it appear as if advocates of freedom are unhinged utopians, thinking that perfect happiness awaits all people the moment the market is fully enabled (it "will bring the economy to nirvana," he says). It must be satisfying for our author to fight against such scandalous straw men. What await all people under unhampered free market are merely rationality in economic calculation, a non-self-contradictory government policy if we admit the need for government on some level, and the fastest possible rate of advance in the standard of living.

It is only if the "problem" is phrased very generally as "locate the best form of social organization" that "laissez faire" would be the answer to it.

Entrepreneurship then incorporates both strategy or long-term planning and tactics or thinking on one's feet. What can be predicted (or assigned probabilities to), one ought to predict; what cannot be predicted, one ought to handle with the opportunism of a champion football player, the effortless quickness and grace of a predator, and the well-honed skill of an intrepid master hunter as it comes upon him and better than his competitors handle it. The live-in-the-moment, on the edge mentality which can take account of one's surroundings instantly and accurately and make decisions on the spot belongs to the genus of the virtue of fortitude. There are in the economy both risk, tractable though knowledge and understanding, and scary surprises that the fickle fate can throw at the entrepreneur at any time. Prudence and its related virtues and acts cope with the former; fortitude, with the latter.

15. That money serves several functions

Money in its capacity as a *medium of exchange* (MoE) is designed to solve two problems of barter, namely of (1) double coincidence of wants and (2) indivisibility of goods. Under barter, if a person has fish and wants to acquire strawberries, then he has to find that one person

who both has strawberries and wants to exchange them for fish. With money in the picture, all he has to do is find one person, Smith, who just wants to buy fish, exchange it for money, and then find another person, Jones, who just wants to sell strawberries, again, in exchange for money. This makes exchanges far easier to procure. Second, if Smith has a car and wants to exchange it for a computer, some clothes, and university tuition, then he cannot divide the car into units in order to pay the people who presently own the goods that he wants. It would mean destroying the car. But a medium of exchange is highly divisible and can be used in trading unified and valuable objects for a number of less valuable ones. If Smith could always find someone who wanted the car and was willing and able to exchange for it all the goods that Smith wanted, then there would be no need for an MoE.[12] Insofar as money is a medium of exchange, it can be defined simply as that, and only that, which you can spend at the grocery store.

Money also plays the role of a *unit of account* (UoA). It is essential to the functioning of any business to be able to compute revenues and costs. Calculation can proceed under barter, as well, but in an exceedingly laborious manner and only for the simplest chains of exchanges. If, however, all goods and services are assigned money prices in terms of some common unit, then one can suddenly engage in economic calculation. Entrepreneurs demand money (rather than other goods), and insist on paying their factors of production in money thereby strengthening the demand, for accounting reasons because only with the help of money can they engage in business reckoning of profit and loss. The idea is to reduce the heterogeneous inputs and outputs to a common denominator of value so that business operations could be conducted rationally. Individuals too calculate their income and expenditures. It's the network of relative prices that shows how valuable each item is in comparison to all other items. Without money each price would have to not only list millions of barter exchange ratios but also change them promptly with changes in market data.

Some business models require only rudimentary calculation, such as speculation and arbitrage. Speculating involves buying low *now* and selling high *later*; arbitrage involves buying low *here* and selling high *there*. They combine goods with either time or delivery. Though goods are reallocated to their most valued uses, nothing "new" gets produced as a result of either speculation or arbitrage. That may be why Keynes distinguishes between the "speculative motive" and "finance motive" for holding money: the former is for the sake of rationing existing goods, the latter for the sake of producing new goods.

Economic calculation is assisted by relative stability in the purchasing power of money. This pertains to the third function of money, namely store of value.

At the same time money does not "measure" values. Valuation is always an ordering according to rank, an act of grading: first, second, third; monetary calculation is an act of measuring: one, two, three. If goods *A* and *B* both cost $1, and I choose *A*, then I value *A* more than *B* despite their equal price. If *A* costs $1, and I'd be willing to pay for it no more than $10, then it is permissible to say that my consumer surplus is $9. But the $9 is not a measure of my gains from trade or psychic profit. Dollars are not "utils," and of course there are no such things as utils. Moreover, I value *A* not equally with $10 but more than any other set of goods I can buy with this amount. Calculations of consumer surplus can help one make a decision in more difficult cases, such as choosing between 4*A* and 6*B* (such as between a pack of 4 batteries and a box of 6 candies). The first *A* is valued at $10, the second at $8, etc. One sums up these marginal utilities and buys the goods with the highest total utility. But still the two total utilities are ranked; their absolute values are meaningless.

The final social utility of money arises from its capacity to act as a *store of value* (SoV) which is a corollary of its function as a medium of exchange. Here, money is a shield against an uncertain future.

In *Treatise* Keynes privileges the unit of account function of money: "Something which is merely used as a convenient medium of exchange on the spot may approach to being Money… But if this is all, we have scarcely emerged from the stage of Barter." (*TM*: Vol 1, 3) It is true that the cause of low utility of money as a unit of account could stem from the fact that the economy is in the embryonic stage of development. It is only an advanced economy which involves at least thousands of people and in which numerous firms operate that so completely depends upon a reliable way of counting profits and losses. But even a primitive economy with a well-established medium of exchange has "money" in its most primal sense. It has not "scarcely emerged" from a barter economy. It is a fully monetary economy, developing though it is. The reason is that an MoE is needed to deal with the most basic problems of double coincidence of wants and indivisibility of goods.

The three functions of money may be classified as follows. The medium of exchange is a social notion. It has no meaning for an isolated individual. The store of value, on the other hand, makes perfect sense when applied to an individual's hoard of goods. Even Crusoe would likely have on his island dried fish and berries and spare tools and what have you in storage, waiting to be used at the right time. The unit of account function of money is in between or rather spans both of the above: the concepts of profit and loss for whose sake economic calculation is performed take two forms: (1) psychic profit requiring only an individual and (2) monetary profit requiring a money-using

community.

We can further relate the three *functions* of money to the three *uses* of money: money acts as a medium of exchange when it is consumed; as a unit of account when it is invested (allowing business calculations); and as a store of value when it is hoarded. Hoarding in a barter economy is done by collecting actual consumer and capital goods; hoarding under indirect exchange in order to keep more wealth for a rainy day can be done by varying the demand for money.

Gold is said to have exchange-value in its capacity as money and use-value in consumer and industrial applications. But both gold and even fiat money have essential use-values manifested in their utility as an SoV.

Money then is demanded for three reasons: (1) for exchange, (2) as future money at the expense of present money, and (3) as cash balances. Keynes seems reasonably aware of this correspondence; for example, he proposes as the reasons for demanding money "(i) the transactions-motive, i.e., the need of cash for the current transaction of personal and business exchanges; (iii) the precautionary-motive, i.e., the desire for security as to the future cash equivalent of a certain proportion of total resources; and (ii) the speculative-motive, i.e., the object of securing profit from knowing better than the market what the future will bring forth" (*GT*: 170). As we move from (1) to (2) to (3), the function of money under consideration can be fulfilled by more and more things. Thus, a country's fiat money is the only medium of exchange on its territory. But any country's money can be used as a unit of account. And numerous things, such as precious metals, collectibles, securities, capital goods, real estate, can be used as stores of value.

Rothbard speculates that if the future were certain, then no one would want to keep cash balances. The idea is that if life offers no surprises, then everyone knows exactly when he will need any particular amount of money to pay the bills. Then everyone has a reason to loan out his money upon contracting to receive it back on the very day and time when the bills are due. There can be no monetary system without uncertainty. Perfect foresight then seems incompatible with indirect exchange. It is true that the entire money supply will be at all times available for borrowing, with actual borrowers arising sporadically and spending their newfound money instantly. The flaw in this reasoning is precisely the assumption that there will *always* be people who will want to borrow. And that is not obvious. One may have no choice but to keep his money even if he has to pay for storage if he can find no one to lend it to. Moreover, even if certainty obviates the need for money as an SoV, it does not touch money's utility as an MoE and UoA. Even if money has no use-value, it will still retain its exchange-value and calculation-value. Therefore, it will still be advantageous to keep cash balances though no

longer hoarding them.

All kinds of money, whether commodity or fiat, have exchange-value, calculation-value, and use-value in these senses.

As far as the utility of money to an individual, first, speaking precisely, money should not be thought of as a claim on society. Without legal tender laws anyone can refuse to sell his goods for the generally accepted medium of exchange and demand something else for them in return. Under legal tender laws money is de jure a claim on society because everyone is required by law to accept the particular medium of exchange for his goods. Smith's money represents society's debt to Smith. Regardless, if one has money, then most of the time the state of affairs is *as if* everyone else owed him goods for that money.

(i) It is "disrespectful" to argue that money is "only" useful for exchanges. Far better to recognize that money is an *exclusive* means to all goods and services on the market. (Timberlake 1987) Now plenty of things have an exchange-value: again, if Crusoe has fish, then he can exchange it for Friday's strawberries, so fish for Crusoe is a means to the strawberries. What makes money unique is that it works even in a global market by virtue of being a universal and international medium of exchange. It is as though in exchange for money (especially when it is gold), the whole world – and not merely the fish-loving strawberries dealers – owed to the money-holder *stuff*: (1) all available merchandise, (2) in whatever combination he chose, (3) in whatever amount, (4a) at any time and (4b) however apportioned through time, (5) on demand. In this lies money's preeminent utility *as money*, over and above the utility of any other good, for an individual human being. Indeed, as pointed out above, any MoE is a social construct but useful to individuals.

(ii) With the help of money as a UoA, an entrepreneur can make his business as intricate as he wishes and still know when he is in the black or in the red. But society too benefits from this in that private enterprise is duly enabled and freed. Both the individual and social utilities of money here are on equal footing.

(iii) Lastly, we have made a distinction between the use-value of the *materials* (Au, Ag) out of which money is made and the use-value of *money itself* in its capacity as an SoV. The former is manifested in the use of these metals for industrial purposes, in jewelry and ornaments, or even as protection against inflation in which case it is used as its own store of value.

The value of money understood as the *value of the fact that society uses money* to everyone is the sum of its exchange-value, calculation-value, and use-value. The *marginal utility of money*, the utility of an extra dollar to a person, on the other hand, is either the utility of the actual good the dollar is used to buy or how useful a buffer it is against

uncertainty when kept in a hoard. Note here that the utilities of no two *ends* can be *equal* to each other because all utilities are ranked as higher and lower on one's value scales. One could not *choose* between two objects which supply equal utility, and choice demonstrates that the thing picked is after all valued more than the thing set aside. But the case of money is different insofar as the utility of an amount of money as a *means* is indeed equal to the utility of the goods this money is spent on as an end, absent transaction costs. In other words, it is equal to the value of the most valuable basket of goods this money can buy. This implies that the marginal utility of money, dollar after dollar, diminishes much slower than the marginal utility of any particular good, item after item. In equilibrium the marginal exchange-value of money and its marginal use-value are "equal." (One can of course invest or loan his money in which case if the interest rate is 5%, the present marginal utility of $1 invested is the exchange- or use-value of $1.05 a year from now.) For example, an increase in the money supply such as from gold mining puts extra cash into the hands of some people. This causes the marginal use-value of their money to decline relative to its marginal exchange-value. They spend some of this money on goods, thereby restoring both their own equilibrium and, by raising the price level, the overall monetary equilibrium.

Again, the SoV applies to individuals but is useful precisely to society which is spared the necessity to produce numerous consumer and capital goods and keep them idle in hoards. Only money needs to be hoarded, hence no actual resources are wasted. Astonishingly, Dillard (1948) reverses this understanding, describing the pure liquidity preference (LP) theory of interest in the following way: "those who hold surplus money must be bribed before they will surrender it to those who will put it to a socially beneficial use, that is, will use the money for mobilizing labor, material, and machines for the production of goods and services." But it is the same with any good. Money produces the pleasure of security when serving as an SoV; a bicycle produces the pleasure of riding. In order to forgo both, their owner must be "bribed."

Dillard continues: "Those who receive interest income are performing no socially useful function." This is not true: people who receive interest provide instant gratification to those who pay interest who, if it weren't for the loan they were thereby granted, would have had to save the money themselves over a prolonged period of time. In any case, those who enjoy their personal properties like TVs and books and cars are also performing no *socially* useful function. So what? Are the consumers beyond the pale too for Keynes and Dillard? Most useful items, including means of production, are owned by somebody. If Smith owns a capital good, then in order for Jones to use it, he has to pay rent to Smith. Opposition to "rentiers" and a desire to "euthanize" them is

tantamount to condemning private property. ("Rentier" is a misleading term since interest and rent are different phenomena, and in receiving interest a capitalist profits not from the scarcity of capital but from the scarcity of time.) We will encounter more evidence that Keynes was ultimately a socialist later.

Our author seems to imagine that the economy underperforms due to scarcity of money. In addition, Keynes "rejects the idea that capital is productive" (194-6). This is surely grotesque: money is productive, while capital goods are not! Rothbard (2010) counters wisely that "the change [in the money supply] does not – unlike other goods – confer a social benefit. … it doesn't matter what the supply of money is. Any supply will do as well as any other supply." (29, italics removed) Let me suggest that for Keynes the pure liquidity preference theory of interest amounts to the pernicious – as he sees matters – choice of the public to hold banknotes instead of depositing their money into banks. Interest is that "reward" that entices a person to take his cash from under his mattress and deposit it, making it possible for the bank to pyramid credit on top of the new reserves. Liquidity preference explains the interest that banks pay to depositors, not the interest that banks charge on their own loans. The rentiers' intransigence is the only thing that allows "capital" to remain scarce.

Keynes argues that "the importance of money essentially flows from its being a link between the present and the future" (*GT*: 293). Well, what about durable capital goods? Don't they "link" present and future too? What about contracts? They specify terms of exchange including future deliverables. What about human plans? They envision human actions in the present using resources accumulated in the past to bring about future utility. Why aren't they a link? Money, on the other hand, does not serve as such a link because cash balances are kept for the sake of hedging against an *uncertain* future, and no link is possible to the *unknown*. There are no events to link the present *to*.

There are at least three kinds of debt. First, a bank may owe gold to Smith upon his showing a valid banknote. This is simply the recognition that the bank is merely a glorified warehouse, a storage silo, that the gold belongs to Smith by right, and that the bankers have not perverted justice by lending this gold out. Second, there is the "social" credit, i.e., money. Though it is no crime in a free society to refuse to sell one's goods for money, the market incentives ensure that this rarely happens. Self-interest substitutes for justice in making money valuable. The *disutility* of owning money is that even as makes a person society's "creditor," it earns no interest. That is why it is sometimes called "non-interest-bearing debt." The cash in one's pocket does not earn interest for its owner. Third, there is the normal transaction of Smith lending money to Jones. There is no longer an "on demand" aspect to Smith's

claim: he contracts to get his money back only on a determinate future date, but he is compensated for this inconvenience with interest income.

That is why if a person is asked whether he wants fish or an equivalent amount of money to be used in exchange, then he will likely choose money because he will be able to cut out one step, namely, finding a buyer for the fish, in the acquisition of what he wants. In the language of older philosophy, money is a potentiality situated between actuality (goods bought with its help) and nonexistence (insofar as one cannot eat money). Such a potentiality is useful precisely because it lacks a full-blown identity and because of its fluid protean nature. The pleasures that money can buy are almost endless.

16. That fiat money must have its origin in commodity money

The Post Keynesian economist L. Randall Wray advances an incredible proposition. He is partial to the view that

> money originated not from a pre-money market system but rather from the penal system. … An elaborate system of fines for transgressions was developed and, over time, authorities transformed this system of fines paid to victims for crimes to a system that generated payments to the state. …
>
> Why would the population accept otherwise "worthless" sticks, clay, base metal, leather, or paper? Because the state agreed to accept the same "worthless" items in payment of obligation (fees, fines, and taxes) to the state. ("Money" in King 2003: 262-3)

Is Wray not noticing an infinite regress? The state accepts fiat paper money because the public uses it, and the public uses it because the state accepts it. What boots up the whole process? The state is just one consumer on the market. Why should it want paper, if other market agents are still bartering for their goods and services? What will the state be able to *buy* from the public with the "worthless" paper? Under barter, any man would be happy to pay taxes to the state in paper. He would print some himself. Ah, Wray might interject, but the state could designate paper as legal tender and prohibit private counterfeiting. It sure could try, but how will it determine the prices of all goods and services in terms of the nascent money when there are only barter exchange ratios? Is the price of a gallon of gas or bushel of wheat 2 "sticks," 0.02 sticks, or 200 sticks? This problem is insoluble, which is why neither commodity money nor fiat money could be imposed on a society by a state "from a pre-money market system." In addition, there is no record of fiat money coming into existence without commodity

money preceding it.

Commodity money originates according to the monetary regression theorem. A piece of gold has two sources of demand: demand for use in consumer and industrial applications and demand for exchange. In other words, gold, to reiterate, has both use-value (understood as the value of the chemical element gold and of the actual objects made of this material, *not* the financial security from hoarded gold-as-a-store-of-value because the latter is contingent on gold becoming a medium of exchange first which at this juncture in the argument it has not yet done) and exchange-value. Now the present prices are determined with the help of the prices of the immediate past. All entrepreneurial actions that bring novelty into the market deviate from the economy that just existed and therefore take that economy and the prices in it as their starting point. As we regress into the past, we finally reach a point at which a given commodity now used as a medium of exchange had only use-value and no exchange-value at all. Moving from that moment in the ancient past again to the future, we observe the commodity gradually acquiring exchange-value until the latter comes so to dominate its use-value as to make the use-value pale in comparison with the exchange-value. The regression theorem shows how a monetary price system can emerge from a barter economy.

The emergence of money is subject to the phenomenon of network effects. As the use of gold as a medium of exchange spreads, gold's utility as money increases approximately in proportion to the square of the number of people who accept gold as payment for their goods and services. The greater the market in which gold is monetized, the greater the benefits to each individual of using gold and the greater the incentive to those groups of people yet unincorporated into gold-based production and exchange to join the network. When they do so, the size of the network is increased which makes the network still more valuable to its members. Having reached a certain critical mass, gold is poised to become international money accepted all over the civilized world.

This is the original essence of the term "gold standard": a universal custom generated privately by the market, that is, by human action (i.e., of individuals acting in their own pecuniary interest as buyers and sellers of commodities) not human design (i.e., by an armchair economist-philosopher of social institutions or government). This custom is by no means a convention or "social contract," it does not coerce dissidents to agree to trade in gold under threat of punishment. It precedes any national currency or fiduciary media. Other meanings, such as a state of affairs in which government paper money is redeemable in gold, are strictly derivative and must be used with care.

How can fiat money displace commodity money? Let's consider a

few scenarios. (1) The government has 1 million ounces of gold in its treasury and issues 10 million $100 bills, promising to exchange $1,000 for 1 gold ounce and vice versa. This does not count as the introduction of fiat money at all but is a perfectly innocuous use of money-substitutes. The treasury is like a 100%-reserve bank. No new money is created, and all money is still gold.

(2) Same as the above, but the government inflates by printing more paper tickets than is backed by the gold in its stock. This is an example of a lawless political regime in which the government thinks it can get away with a crime. Inflation of this sort sooner or later triggers devaluation, so it is unsustainable. Perhaps the government has allowed banks to maintain fractional reserves ultimately in order to destroy honesty in the monetary system and inure the public to the idea that money, and its purchasing power, is not anything stable and secure but can be created at the state's will.

(3) The government owns no gold but prints fiat money and sets an exchange ratio between paper and gold. If the state insisted on being paid in paper, then on April 10th one would buy the amount of bills equal to the tax from the government for gold, and on April 15th he would mail the tickets back to the IRS. This makes little sense: why not fix the taxes, fees, etc. in gold directly?

(4) Same as the above, but the state orders that its paper money be accepted on par with gold everywhere. This is politically impossible, entailing that the people must have given the state the ability to expropriate any and all goods at its pleasure, bypassing the tax system. A transition that drastic from free markets to government omnipotence could never be allowed.

If the state is already sufficiently powerful and the subjects are sufficiently subhuman, then the state does not have to resort to such a subterfuge, it can plunder any merchant of his goods directly. No, if fiat money is to be introduced, then it must somehow unscrupulously co-opt commodity money on whose emergence and function it will be parasitic.

The process starts with money-substitutes, claims on commodity money which may be stored in banks in their capacity as gold warehouses. The public may become used to trading in paper currency exclusively. Then, even if the link between paper and gold is severed, say, by a government decree that frees banks from their obligation to produce gold on demand upon being showed a valid banknote, then prices are already quoted in terms of "dollars" and not gold ounces. In addition, people's relative wealth is unchanged, given that the ratio of Smith's cash balance to Jones' cash balance is the same before and after the decree, even if all the gold in the banks' vaults is quietly transferred into some government storage facility. The present prices in terms of inconvertible currency are set by means of the prices of the immediate

past in terms of gold. Here is an approximate sequence of events (though historically the gold standard was undermined and destroyed through wars and other state-fomented crises).

(1) There is an acknowledged deficiency in the free-banking industry plagued by government interventionism (or in this case perhaps lack thereof). Though the state is wholly responsible for it by allowing banks to keep fractional reserves and "suspend specie payments" at their discretion so that it could benefit from inflation, the free market is predictably blamed.

(2) Spurred by ideological pressure to institute a more "scientific" monetary regime, a law is passed requiring banks to grant deposits in central bank (such as the U.S. Federal Reserve) notes, not in gold. The notes are still redeemable in gold, but only the central bank is allowed to own gold in any quantity. The idea is that the Fed would be too big to fail and can be trusted always to endure.

(3) The banknotes of individual banks become redeemable only in Federal Reserve notes which the banks obtain from the Fed by exchanging their gold for them. Eventually, all gold is transported into the vaults of the Fed.

(4) The government outlaws the issue of banknotes by commercial banks entirely. Though banknotes are scarcely any different from checks and serve the exact same purpose, this move serves to solidify the impression that people must trust only the state to manage currency. In order further to cement its grasp on money, the government declares the Fed notes legal tender. As a mock show of goodwill, it indeed accepts them as payment for "fees, fines, and taxes."

(5) The state insures the deposits of small balance holders, indicating that banks will not be allowed to fail and that deposits are "safe." They are not safe from inflation, and the banks grow irresponsible, but calmness ensues, and the state is even more trusted with administering monetary policy.

(6) The government can now inflate at will, but its power to do so is limited by the gold standard that is still being maintained. Devaluing the currency is an unfortunate measure, damaging the state's prestige both at home and abroad, to which the government does not want to resort. Far better every so often to suspend specie payments now on the level of the nation as a whole. After the condemnations of gold users as antisocial miscreants have gone on long enough, the final act is by law to restrict the convertibility of Fed notes into gold, such as to international traders only, and then abolish it altogether. A fully fiat currency is now born. The state is victorious.

Ideally for it, the government would want absolute power over the money supply: if it could simply set its account balance in the Treasury to any amount it wanted, $10 trillion today, $1 googol next

year, it would gladly do so. (Of course, that would instantly result in both socialism and hyperinflation.) The reason why the state cannot do this now is that it was not omnipotent, and historically there was resistance from the people who did not always so readily believe the claim that money statism is for the "greater good." The most the state has been able to get away with in the United States so far is the current system of central and fractional reserve banking with its fully fiat and credit money.

This is an illustration of how the government cures interventionism with socialism. We will have occasions to observe a dynamic like this again later.

It is clear that the "taxes-drive-money" theory according to which that thing becomes money which the non-totalitarian state accepts for payments of taxes, does not pass muster with economic reasoning.

There is yet a grain of truth in Wray's understanding. For a currency that the state accepts in payment of taxes and fines has the ability to save a citizen from government violence. If one fails to pay taxes, then he runs the risk of being found out and punished. Now paying taxes is not really an "exchange," since we reserve this term for noncoercive market transactions. Thus, besides use-value and exchange-value, money has "protection-value" that helps to render the state harmless to a person. But neither the use-value nor exchange-value of a commodity arises out of protection-value. For example, taxes in medieval Japan were set in rice, something that had obvious use-value. Later taxes came to be set in cash, i.e., something that had acquired exchange-value. It may be true, however, that protection-value strengthens the overall value of a currency.

But our author is not done. He considers the "the one-nation-one-currency rule" to be an "extraordinary coincidence" (262). Let's take a shot at a solution. First, a currency can be driven out according to Gresham's law. Consider that a 1-ounce American Gold Eagle (a gold coin minted by the U.S. government) has the face value of $50. As of 2021 it is worth over $1,800. When faced with a choice to pay for a pair of shoes with the gold coin or with a $50 Federal Reserve note, I would without hesitation use the latter. This behavior keeps gold coins out of circulation, hoarded, and encourages the use of fiat money "for all debts, public and private." There are three individually necessary and jointly sufficient conditions. First, merchants want to deal with dollar-holding customers. Second, dollars are legal tender such that creditors are not allowed to discriminate between media labeled "dollars." Third, some media are artificially undervalued relative to others, as gold coins are undervalued relative to paper dollars – they are worth much more than the amount stamped on them.

Second, a nation is a very extended family unified by language,

common law, and customs. In America it was a custom that the word "dollar" meant one weight of gold, and in France the word "franc," though also meaning a certain weight of gold, stipulated a different weight. "Dollar" then was neither fixed to gold nor floating relative to it, it was rather a name for a unit of weight like ounce or pound. Keynesianism as an ideology supported by its economic theory has triumphed throughout the world, but its implementation, as though every nation embraced its own "Keynesianism in One Country," has been carried out by each nation individually. Each nation is governed by a state which could introduce its own central bank and conveniently – deviously – use the name of the old currency for something brand-new, fiat money unconnected with gold. "Scientific" management of money has replaced the international gold standard which has been fractured, broken into pieces on the level of nation-states which now administer their own fiat currencies, though Keynesians still talk about a world fiat currency now and again.

That is the ideological part of the solution. It remains to suggest that if two currencies, say the dollar and euro, are similar in quality and are accepted on a large enough territory, then people do not find it convenient to belong to more than one network. Even a manifestly superior currency, such as the U.S. dollar as compared with the Russian ruble, may not be able to supplant the inferior currency because people still want to do business with those who own rubles. At the very least it will take a while for the better currency first to overcome and then to take advantage of the network effects. It would seem that a money network, once it exists, is "sticky," i.e., tends to endure despite its troubles. The end result is the perfectly ordinary situation of "one nation, one currency."

The case of Bitcoin is interesting as it seems at first glance to offer a counterexample to the present theory. As of 2021, Bitcoin cannot reasonably be called "money" because the network of people using is too small. The greatest hurdle to Bitcoin becoming money was this. If I am a business owner, then how do I *price my goods in bitcoins*? Do I set the price of BTC 1 for a pair of shoes, BTC 0.001, or BTC 1,000? There is no answer to this question within Bitcoin's own universe. That all prices are relative is economics' own relativity theory; any individual price acquires meaning only within a large network of other prices, but the network itself is created as one price is set after another. According to the monetary regression theorem, Bitcoin cannot have recourse to the progression process. A good cannot "gradually acquire" positive exchange-value from zero use-value. How then can prices be determined for goods in bitcoins? The upper limit on the price of a bitcoin in terms of other currencies is set by the marginal cost of mining. Suppose it costs $1 to mine BTC 0.001 in terms of the energy and computing resources

spent. If the price on a currency exchange is $5k / BTC 1, then it will pay to mine, then exchange bitcoins for dollars. This will bid down the price of bitcoins.

What about the lower limit? There is none. It is completely arbitrary. But now we can use a trick. People have set up Bitcoin as a *currency speculator's money* used easily to convert one type of currency into another. This is the non-monetary value / use of bitcoins. The initial actual price is arbitrary as long as it is below the marginal cost. Any person running an exchange can pick such an arbitrary price, say $200 / BTC 1 or $20 / BTC 1, and say that dollars will be exchanged for euros, pounds, etc. via this "messenger boy" or "envelope."

If this conversion rate is high enough, then early Bitcoin adopters will profit handsomely by selling their hoards. But that is no skin off the nose of later adopters. As long as they can use Bitcoin to convert currencies into each other with greater ease than before, they too are satisfied. Exchange owners do not really care either: as long as they feel their bitcoins will be bought (and that is an entrepreneurial risk they are taking), they can make a living off exchange fees. The very first currency exchange thereby set up will govern the bitcoin prices for all competing exchanges that would come later. Thus, Bitcoin has acquired a price and piggybacked on present prices in terms of dollars. This does mean that Bitcoin would have been a nonstarter in the presence of a universal gold standard, since then there would be nothing to convert.

Of course, when people quote the prices of their goods, they derive the bitcoin prices from their dollar prices. But that means that the chief problem with bitcoins – the establishment of an exchange rate with dollars – has been solved! That people still use dollars for economic calculation has to do with the size of the network of dollar users vs. bitcoin users. But even a large network is not invincible. It has an initial advantage but can with time be replaced.

There is also the matter of money serving as a unit of account and store of value. When grandma goes shopping, she sees prices quoted in dollars, and those are *meaningful* to her. She sees a box of cookies priced at $5.00 and says, "No, these are too expensive." If the price is also quoted in bitcoins, such as BTC 0.032, then she cannot yet tell whether this is expensive, or cheap, or affordable. She cannot use this price to choose between consumer bundles. The store may post prices in bitcoins, but either they or grandma will have to convert them into dollars to make heads or tails of them. Businesses of course may find it easier to calculate with the help of computers which can convert currencies into each other on the fly. Nevertheless, the conversion would seem to be a necessary step. Additionally, Bitcoin, while it remains a small network, has a volatile price. It functions poorly as a store of value. However, these are only outgrowths of the general

barrier of network effects.

Since Bitcoin is not yet money, can it be an investment? Why would people buy bitcoins and hoard them at the now "market" price? In anticipation that bitcoins will become real money, that the size of the network of people transacting in bitcoins will grow due to the perceived advantages of this cryptocurrency. They hope that the demand for bitcoins-as-money will skyrocket which will raise its price in terms of dollars, since supply is capped, and mining becomes increasingly more expensive with time. They hope that bitcoins will outcompete dollars such that perhaps 20 years later we will all be converting dollars and euros into bitcoins when calculating costs and revenues.

Again, now that the price of bitcoins in terms of dollars and every other currency has been established (thanks to the gambit of using the crypto for currency exchanges), it is immaterial whether prices for goods are quoted in terms of dollars or bitcoins. That they are quoted in dollars is an artifact of history, of Bitcoin's newness, and tradition. It is true that the price of Bitcoin is volatile, but that is only precisely because most prices are *not* quoted in terms of it! That is, Bitcoin is volatile because it is not yet a genuine medium of exchange, and it is not yet a genuine medium of exchange (despite its proffered advantages over dollars) because it is a volatile currency. And it is such because people's opinions about its future prospects as a medium of exchange change all the time.

This catch-22 is just another way of presenting the (potentially surmountable) obstacle to Bitcoin of network effects.

17. That money is not neutral

There is in the economy the speculative-theoretical aspect and the active-practical aspect. The former is all the economic laws according to which it functions, such as the laws of marginal utility, of comparative advantage, of returns, and so on. It is the theory of value and of prices and of interest rates. It is comparison of economic systems like capitalism vs. socialism. It is all the ways in which the economy is affected by government interventions from prohibitionism to child labor laws, e.g., it is the answer to the question "What will be the consequences of the new health care legislation?" The latter discusses things like: Which products are being offered for sale to the consumers? How is the production of all these goods being executed? What is the share price of IBM? What is the CEO of Ford doing right now to attract new customers? Should I invest in the S&P 500 index mutual fund? The speculative part is described by economic theory. The active life of the economy is the work of the hands of actual entrepreneurs. These are very different facets of the economy requiring different skills to

construct, that is why economists generally make poor entrepreneurs and why entrepreneurs generally make poor economists.[13]

Nassim Taleb's (2010) entire book is essentially an extended attack on economics vitiated, however, by the author's lamentable misapprehension of the scope and method of economic science. Taleb thinks that economists predict the future and chastises them for doing a bad job of it. This is a ridiculous straw man; *entrepreneurs* predict the future; economists deduce universal laws of social cooperation – as well as what happens when people try to break those laws. If it is advantageous for entrepreneurs to use sophisticated computers to help them make educated guesses about future states of the market, then more power to them. Of course, if everyone uses these machines, then their utility to each entrepreneur declines, though society may or may not benefit. Still, some model builders and programmers will be smarter than others which will grant them a measure of competitive advantage. Further, it is certainly possible that a person with a PhD in economics can learn computer programming and write a piece of software to help his firm make money. But he will be doing that in his capacity not as an economist but as an entrepreneur.

To ask whether money is neutral is to ask whether *changes in the money supply* have implication for (a) the theory and (b) the practice of the economy in (1) the short run and (2) the long run. The reason why I single out the supply of and not the demand for money is that in most industrialized countries the state-supported central bank manages the money supply, and the question of the neutrality of money arises precisely in the context of the central bank's monetary policy. Under a free-market international commodity money standard (such as gold), the money supply would increase so slowly and imperceptibly that the subject of money's neutrality would have no practical significance. This problem comes up only under inflationary fiat currency regimes. It is especially interesting to interventionist economists who want to know what depredations their employer the state can get away with. They want to know to what extent the state can inflate without damaging the economy and its popularity with the masses too much. The demand for money too rarely changes abruptly and, ignoring government spending (which we can do under "small government"), is due entirely to individual choices of the market actors. There is little to go on here since there is no pattern to the changes in the demand for money (other than in secondary deflation). This demand would ebb and flow and even cause the interest rate to oscillate randomly around its natural rate, but it would not result in business *cycles*. Money would still be "a kind of loose joint in the self-equilibrating apparatus of the price mechanism," but it would hardly "impede its working" (Hayek 1942: 408). The demand for money can rise during a bust but as an effect of and even

remedy for it not cause of it. Increases in the supply of money will yield "new money"; decreases in the demand, "newly activated money"; and the former is more important.

In the short run money is not neutral either for the speculative or for the practical aspect of the economy. Credit expansion, administered by the central bank and the fractional-reserve banks, has consequences for the unfolding of the market process that are highly peculiar and are vastly different from the consequences of sound money and honest finance.

As to theory, economics demonstrates the inevitability of business cycles as a result of the inflation conducted by the monetary authority in conspiracy with the banks. It describes the threat to consumer sovereignty from Keynesianism-inspired government spending. It throws light on the interaction of the public's time and risk preferences with the state's monetary and fiscal policies. As we'll see, changes in the supply of and demand for money also affect the interest rate on the loan market by temporarily perturbing its value as would be determined solely by the people's time preferences.

As to practice, new money enters the economy from different points, raising prices unevenly (another conclusion of pure theory), resulting in consumer products and businesses actually operating being quite different from their counterparts in a noninflationary economic monetary system. Not all prices are equally flexible, for various reasons some are stickier than others, so the propagation of the change in the supply of or demand for money changes, or distorts, relative prices. The most important manifestation of non-neutrality of money occurs in money supply inflation, especially continuing or accelerating kind. For example, velocity of money V is affected by changes in money supply M insofar as people seek to get rid of their money faster in an inflation. The size of one's income, what one can buy with that income, which technologies are being used in which production processes, who the captains of industry are, which businesses are growing and which are shrinking may all be different given different money regimes and different monetary policies of governments and central banks wherever they have control over the money supply.[14]

In the long run money is neutral for the speculative aspect and not neutral for the practical aspect of the economy.

Theoretically, once a particular instance of credit expansion has worked itself out, the price level fully adjusts, and the recession after the boom is over, the situation is no different from that which existed before the expansion was launched. The new money supply is capable of serving the needs of society and individuals just as well as the old money supply. The economy, barring further government interventions, will be working exactly as it did in the beginning of its story, that is,

resulting in similar consequences given similar nudges to it.

But the *practice* of the economy is another story altogether. For the credit expansion will have drastically rearranged the actual structure of production and thereby the kinds, quantities, and prices of the consumer goods available on the market. Since the business cycle is destructive of prosperity, people will likely be poorer after all is said and done than they could have been under, say, a full-bodied gold standard. In other words, different firms will be operating, producing different things, using different means and techniques. The economy will *function* similarly, but it will have different *content*.

Of course, if credit expansion and contraction, bank reserve requirements changes, or fiat money creation does not stop after the first business cycle is over, then even in the long run the cycle will keep reoccurring. In that case money supply changes will not be neutral speculatively in the long run but only because the sequence of similar to each other short-run intervals will compose that long run.

Money then is not neutral and affects not only the absolute price level or purchasing power of money but also relative prices and the direction of production. Who gets the newly created money are the "distribution effects"; how this money propagates throughout the economy as it gets spent are the "differential income" effects. But in addition, depending on where new money enters the economy, it can push the economy out of equilibrium that takes a long time to correct. The resulting disequilibrium is not the creative kind. We can call this the "injection effects." The Austrian business cycle theory picks up on this and argues that the boom is generated via expansion of credit by the banking system, an act that perpetrates a sort of deception of the actors in the market, and a bust follows inevitably when equilibrating forces reassert themselves.

There are then several reasons why money is not neutral in the long run. First, serious disruptions like credit expansion falsify the rate of interest that serves as a key signal to entrepreneurs regarding how best to allocate capital between production stages. Thus deceived, businessmen embark on projects many of which are doomed to crush and burn from the start. In the long run this makes everyone poorer. (Changes in the demand for money, unlike changes in the supply under a fiat money regime, produce no disasters: they do not generate the business cycle, nor can they result in endless price inflation. There are no such things as continuous or accelerating increases in the velocity of circulation except in hyperinflation as an aggravating factor.) Second, more generally, monetary changes are intertwined with all other events and change the future in ways we can't anticipate. The long run without monetary changes is then different, though not necessarily worse, than the long run with them. The PL disequilibrium arising from changes in

the supply of or demand for money will be equilibrated in mysterious and economy-altering ways. Third, there are Cantillon effects arising from the fact that, as we have seen, new money is always injected into the economy from specific points, benefiting some and harming others. Those who benefit obtain their money without producing anything of value. It is considered politically incorrect to acknowledge Cantillon effects because that would pin the responsibility on the state and the Federal Reserve for massive theft, thereby belying their claim that they care for general welfare, since theft so obviously diminishes it. (Under gold standard "private" theft of this sort is kept to a minimum by the high cost of gold mining; under fiat money the state is the unrestrained thief-in-chief.)

Paul Davidson (2009) argues that what causes neoclassical economists to take money supply inflation to be a reliable cause of price inflation is their belief that money is neutral. (While I judge Keynes and the Keynesians to be often wrong as this book testifies, I am with Davidson in finding the mainstream economic theory to be sometimes just plain strange.) I agree, of course, that money is not neutral in the senses just described. But the connection between printing money and decrease in money's purchasing power does not thereby disappear. In philosophy of causation, money supply inflation would be called an INUS cause of the rise in the price level, or an *insufficient* but *necessary* part of a condition which is itself *unnecessary* but *sufficient* for the result. (The term originates from John L. Mackie.) For example, there is a set of conditions, such as creation of fiat and credit money coupled with no increase in productivity, no trade deficit, and so on, which is sufficient to raise the general price level. At the same time it is not necessary because price inflation can be caused by other events, such as a decrease in the demand for money or a disastrous war that results in general impoverishment. But given the specific complex condition just mentioned and in the absence of other sufficient sets of conditions, money supply inflation is necessary for price inflation because without it the other conditions in the set will not do the trick. Neoclassicals thus correctly affirm the effect yet mistake its cause; Davidson denies even that the effect need occur. The reason is that Davidson favors wage controls in a futile hope to prevent price inflation from following on the heels of money supply inflation.

Humans are normally very good at devising increasingly lower-cost ways of producing various goods. But the value of money depends precisely on its scarcity, on its marginal cost of production being high relative to its purchasing power and resisting technological progress, a fact which makes money "sound." (For example, a philosopher's stone or *Star Trek*-like replicator, if discovered or built, would make gold useless as money.) With money, human ingenuity is *supposed* to be stumped,

and producing gold more efficiently has so far fortunately proven to be a very tough nut to crack. Indeed, the objection that gold mining is wasteful misses the point. First, gold, as a result of the long historical evolution of money, has been chosen as the best and most stable material out of which money is made. Second, gold money consumes the least amount of resources unproductively as compared with every other medium including in the final accounting fiat money.[15] Third, gold is supposed to be expensive and difficult to produce; that's just what makes it superior.

The idea of neutrality of money would never have been entertained if money had remained a privately minted commodity. For that is the shape that normal money takes. It has its own supply and demand; it is produced, usually by being mined out of the ground; consumed, when it is spent, invested, hoarded, or used directly for purposes other than exchange; and depreciates due to wear and tear. Money is not part of the cosmic order, forbidding and unassailable, imposed upon men by a mighty state "for their own good" as a kind of eternal and immutable measure for economic calculation. It is not any ghostly oil that lubricates the economy as an unmoved mover, affecting nothing in operating and remaining unaffected itself. It is a tool for securing success of numerous human endeavors, and it is enmeshed into human valuations and actions and life. Fiat money is not some "ideal" money purified of its embarrassing roots in something tangible. State control of money is a catastrophe. Metallic money (or gold after silver was demonetized as unnecessary (for smaller transactions) and inferior) is not a fetish or some primitive relic of the past; it is on the contrary one of the most important human inventions ever made. Government control of the money supply is not an improvement over commodity money. It is not a better mousetrap, it is worse – much, much worse, a sign of degenerate – anti-intellectual and immoral – times. In particular, governments today still hoard gold, and they do so not because they need it for any particular purpose but because they understand that they're evil and corrupt, having deceived and plundered the masses, and do not believe in their own mission to manage the money supply. They keep gold because they know it is sound money, and the fiat paper they themselves print is filth.

Ask a man in the street why we want the state in control of money supply, and he will tell you that coins are clumsy to use, that physically moving gold from one bank to another seems dangerous and wasteful, and that society is spared the cost of mining precious metals. The first two are purely technical issues to which enterprising individuals will assuredly find brilliant solutions if given a chance, especially in a digital age. How can they possibly be decisive? The last one, gold mining, as we will see, makes laissez faire work much

smoother regarding the part that money plays in economic calculation than printing money and credit expansion do for an interventionist regime.

Government money is not just an economic disaster in terms of welfare, it's also a crime against nature. It massively empowers the state by allowing it to generate funding for its domestic trespasses and foreign wars that evades the limits of taxation. The idea that the government is appointed to care for the "greatest good for the greatest number," as if it were God exercising providence, is offensive and absurd. The government cares not for the greatest good but for the greatest loot. What brings about such greatest good is not what the politicians do but what they *don't* do, namely the restraints on their power and the consequent rights and liberties of the people. Letting the state manage money is a concession that the people are well advised never to make. It is unrealistic and utopian to believe that this power will not be abused.

In short, money is a *thing* which happens to be extremely useful and marketable. Properties of money change with the growth of civilization. And civilizations are in turn influenced by the adventures of commodities that act as money. Yet though both gold and fiat money are human artifices, there is a sense in which only gold is "natural." It is natural because it was chosen by the market through its evolution, not instituted top-down by force or guile.

18. That saving occurs for a variety of reasons

People do not accumulate money the way roads accumulate falling snow, mechanically and pointlessly. There are numerous reasons why a person might want to abstain from immediate consumption and save his pennies. Saving is always "saving up for something," for some more or less explicit purpose or some forms of consumption [C], investment [I], and hoarding [H].

[H] The first reason is to insure oneself against an uncertain future. One can do so both in his capacity as a consumer and in his capacity as a producer, and one can do so to deal with both troubles and opportunities. For example, for troubles as a consumer, one may keep a cash balance in order to survive a possible loss of a job. It may take a while to find another job, and to carry out his own personal reservation wage policy one will be able to draw upon his savings in the meantime. As we have seen, during this time his unemployment will be voluntary. Let me additionally point out that it is an insult to workers ever to call them involuntarily unemployed in the free market. For that suggests that workers are disabled and supported by their employers' charity. If the employer changes his mind, then the worker is cast out into a hostile

world, helpless and confused. However, entrepreneurs are not their workers' servants, nor are the latter incapable of foreseeing and preparing for troubles ahead.

As a producer, a person may need to preserve his business from failure during an unexpected fall in the demand for his product.

For opportunities as a consumer, one may be thinking of buying a house and taking his time in choosing the right one. He will need the cash in order to snatch a suitable house as soon as an opportunity presents itself.

And as a producer, he may want cash on hand in order to invest quickly in a new prospect that comes his way. "Troubles" and "opportunities" are two of a pair in that missing an opportunity may be likened to getting in trouble.

The demand for cash balances for this purpose can be affected by changes in both (a) the perceived uncertainty of the future and (b) the serviceability of money to protect one from this uncertainty. Thus, people's levels of "confidence" and "optimism" about the future will affect (a), and inflation (deflation) will undermine (strengthen) (b). Hoarding entails "consuming an unspecified article at an unspecified time" (*GT*: 211), indeed possibly nothing, never. This corresponds to Keynes' own factors for saving (i) "To build up a reserve against unforeseen contingencies" and (vi) "To secure a *masse de manœuvre* to carry out speculative or business projects" (*GT*: 107-8).

The *definition* of uncertainty is risk and surprises applied to human affairs and actions, combining the difficulties with both calculation and execution. Being outcompeted and losing money is a *threat* that uncertainty poses to an entrepreneur. And hoarding money is how people choose to *protect* themselves in the face of this threat. It is a bit of a chaotic wildcard since entrepreneurs can be hard put to foresee and provide for changes in the demand for money. However, that is not a flaw within a free enterprise economy. Car insurance companies cannot predict when, or whether, any given individual will have an accident. But the insurance industry as a whole functions adequately. Similarly, no one can predict when an individual will spend some of his hoarded stash, but overall, paroxysms of hoarding and dishoarding cancel each other out.

[C – Arbitrage] The second reason for saving is to provide for a (not unpredictable) time when one does not expect to have any income at all, such as during old age. In addition, one might save if he has a "feast and famine" income pattern. Various kinds of consulting, construction, seasonal jobs are the lines of work exhibiting this quality: sometimes there is more work than one can handle even if he works 60 hours per week; other times there is no work at all. One may also save in order to facilitate a career change. Thus, a man who works as a

middle manager for an insurance company has an ambition of becoming an actor. He saves money in order to provide himself with income to take classes and with time to rise in the acting profession. In short, saving is useful for "smoothing out" consumption over both good times and bad. Keynes lists this as subjective factor number (ii).

[C] The third reason is to either (1) purchase an expensive *consumer* good (in which case while the appropriate balance is being accumulated it should be treated as part of consumption, even as if "already consumed," rather than as part of investments or hoards), (2) give a gift, (3) discharge an obligation. The effects of (1) were described in (I, 8). An example of (2) might be education of or inheritance for children, and of (3), the payment of taxes. Keynes himself proposes "(vii) To bequeath a fortune" which is similar to my (2).

[I – Loan Market] The fourth reason to save is in order to profit from one's low time preference if the equilibrium interest rate is high enough to outweigh the sacrifice in present consumption. (We will deal with these concepts in detail later.) This coincides with (iii) in Keynes.

[I – Arbitrage] The fifth reason has to do with expectations of price movements. If a person expects prices to fall or quality of goods to rise sufficiently quickly, then he may abstain from immediate consumption, believing that he can satisfy his desires more successfully at a later date. This phenomenon is endemic in highly innovative industries, wherein a product may become obsolete mere weeks or months after being bought.

This is also Keynes' "speculative" demand for money: people can hold on to cash to bet on the rise in the interest rate or the rise in the purchasing power of money. If their forecasts are correct, the rise in the IR or PPM will by their actions be sped up, contributing to equilibration (and if the forecasts are wrong, the fall in the IR or PPM will be slowed down, reinforcing disequilibrium). (For IR, this reduces the supply of loans; for PPM it reduces velocity of circulation.) Keynes attaches some special significance to "bears" who hoard money hoping to profit from these events, but I do not find it plausible. Speculators do not cause depressions. Moreover, as Lachmann (1994) points out, a speculator who bets on the rise in interest rates, far from being uncertain, is in fact certain, or at least more certain than the market, that the rise will occur. Uncertainty is not that at all, rather it's the haunting *fear* that something bad, including a rise in interest rates, will happen at just the moment when one will need the cash. It is this fear, specifically the fact that in the real economy *any* investment is speculative and can go sour, that adds to the demand for money. Speculating is the opposite of being afraid, it's the quintessence of entrepreneurial courage. I label this [I] because it is an investment "in money."

[C] The sixth reason is to enjoy the instant gratification of

impulse buying. When one is rich, he does not have to watch every penny, he does not think of money or budgets in day-to-day life, and that is a source of pleasure. This has some relation to Keynes' (v) "To enjoy a sense of independence and the power to do things, though without a clear idea or definite intention of specific action."

[I – Stock Market] Finally, one might save is in order to invest, that is, buy underpriced and undercapitalized, as he figures it, factors of production including intermediate goods in order to profit by producing something the consumers will value.

Demand for money consists of on the one hand how much money one is willing to obtain by selling some of his goods or services, and on the other how much of the money he owns he wishes to hoard or keep in his cash balance. Rothbard (2004) calls these "pre-income exchange demand" D_1 and "post-income reservation demand" D_2 for money. (757-9) The money obtained as a result of D_1 can itself be either spent or hoarded. If D_2 is fixed, then what is demanded *in* exchange is equal to what is demanded *for* exchange, in which case D_1 is due to the money's exchange-value, and D_2, due to its use-value.

Consider the (long-run) equation of exchange $MV = PQ$, where M is the supply of money, V is the velocity of circulation of money, P is the price level, and Q is society's wealth in terms of goods, general prosperity, real GDP. (The main value of this equation lies in describing the influences on the purchasing power of money.) The price level is determined by "money chasing goods," so there are three components to the equation: the money side, the goods side, and the speed of the chase. If M and Q are held constant, then demand for money D can increase only through a decline in V which causes P to fall. We can see that D is inversely proportional to V. But that is not all. For let M and V be held constant, and Q increase, such as when the stock of goods rises due to capital accumulation. Then demand for money increases which again raises the money's purchasing power which, in turn, is equivalent to a falling price level. In this case demand for money is an intermediate term in the causal chain between a change in Q and a change in P. $D \sim Q / V$. Higher Q raises D_1; lower V raises D_2. As a result, the equation can be again rewritten as $P = M / (Q / V)$ or "P is proportional to M / D," reflecting the influences of the supply of and demand for money on the price level.

Keynesians claim that one reason why money supply inflation (m) designed to remedy unemployment might not result in price inflation (p) is that with more people working, productivity (q) will increase which will exert downward pressure on prices. Keynes calls the rise in P upon full employment "true inflation." Even according to this logic, inflation in *this* boom will cause prices to rise in the *next* recession when unemployment grows again. But of course with more people working,

not only *Q* but also *V* will rise proportionately. So there will be price inflation nonetheless. Quantity theory of money then is perfectly valid even under less than full employment. The whole thing is of course hopeless with unending money printing in both booms and recessions.

Saving can be construed in the wide sense or in the narrow sense. In the wide sense, saving is any accumulation of a cash balance for reasons #1 through 7. Investment is not identical to saving widely understood but is rather a form of using the resources saved. In the narrow sense, saving is any abstention from consumption and hoarding for the sake of investing the money saved, where by investment we mean maintenance of or improvement in productive capacity. Keynes writes in *Treatise on Money* that "saving is an act of the individual consumer and consists in the negative act of refraining from spending the whole of his current income on consumption. Investment, on the other hand, is the act of the entrepreneur… [which] consists in the positive act of starting or maintaining some process of production." (*TM*: Vol 1, 172) In this case saving and investment are different. On the other hand, in *General Theory*, Keynes takes "saving" in the narrow sense. There they are the same.

The wrinkle is that in the free market saving is identical to investment, or rather the supply of money savings is equilibrated with the demand for loans for investment by the rate of interest, *unless* voluntary saving is frustrated by credit expansion. Then saving if by that we mean voluntary saving is not identical to investment insofar as the central bank and fractional-reserve commercial banks can create forced savings and channel them to investment. Keynes considers forced savings to be as genuine as normal savings, in fact much of his theory rests on the claim that voluntary saving is economically irrelevant.

Ex ante or planned saving and investment are the entire supply and demand curves of loanable funds; there is no sense in which they are equal. Ex post or actual saving and investment are points on these curves corresponding to a rate of interest, and they are equal in equilibrium.

Keynes writes that classical economists like Marshall thought that *S*(aving) = *I*(nvestment), but it seems to me that they held this because they neglected to take into account hoarding, etc. Keynes makes no such mistake but also equates saving and investment. He does so, however, for a very different reason. Chapter 15 of *General Theory* leaves no doubt that he presupposes modern central banking in all his arguments. In Chapter 17, for example, Keynes argues that "there is a *different* natural rate of interest for each hypothetical level of employment" (*GT*: 242). He must have had in mind the "stimulation" of business activity by the manipulation of the rate of interest via monetary policy. Again, in Chapter 18 he takes the interest rate to depend "partly on the state of

liquidity-preference… and partly on the quantity of money" (*GT*: 246). This is his abortive attempt to explain interest after rejecting time preference. Nothing in Keynes makes sense apart from the assumption, running throughout *General Theory*, that money is ad libitum created by the state and banks.

Under sound finance, saving or supply of credit precedes investment or demand for present money. A person saves a certain amount of cash and then looks for suitable entrepreneurs to grace with "time" (i.e., with the privilege not to abstain from present consumption themselves) for a price called interest. But under fractional-reserve banking demand for credit from consumers or entrepreneurs comes first and elicits creation of credit out of thin air by the banks. Before one has decided to invest, the money does not exist. It is created instantly in the bank's computer upon the entrepreneur's request. This reversal is an abomination, as we will see in the course of this book.

Keynes took this unfortunate state of affairs, namely that investment is financed through fractional-reserve banks with the help of their miraculous money-creating power, to entail identity between saving and investment. There is for him no market for individual loans in which Smith abstains from consumption and explicitly lends the funds thereby generated to Jones for investing. Hence saving and investment are not *equilibrated* to yield an interest rate wherein preferences for present goods versus future goods are balanced as Austrian economics teaches. (More precisely, a "center of gravity" in the form of the interest rate is found for the constellation of people's time preferences on the loan market.) Rather, they are *one and the same thing*, with investment producing savings as "needed." Since money is now superabundant, investment is seemingly not traded off against consumption, and the only limit to the amount of cash invested is the people's liquidity preferences such as holding cash as opposed to bank deposits. It will be proved later that people's time preferences will not be defied, and the lack of a sufficiently inelastic supply of money is a cause of business cycles that are destructive of wealth.

Keynes argues that the amount saved or invested depends on the level of "income" by which he means money income to the members of society. But this income is "a function of the rate of the investment." The classical understanding at best can tell us "what the level of income will be, given… the rate of interest; and alternatively, what the rate of interest will have to be, if the level of income is to be maintained at a given figure" (*GT*: 180-1). One thing he is talking about is inflation ushered in by credit expansion (which increases "investment"). This inflation alters money incomes to people and changes the amounts of savings. The amount of *forced* savings injected into the loan market affects *voluntary* savings. It's true that when the interest rate is

determined not by the public but by the state and its banks, time preferences recede somewhat to the background. But that's like saying that under socialism prices are set by the government, and so supply and demand have little to do with the determination of prices. Or that during a war, resources are sent to people for the sake of winning the battle, therefore satisfying individual preferences is not the purpose of production. Keynes' theory does not apply to the free market.

Consider a statement like "when the interest rate rises, investment falls, and a fall in investment causes a decline in income, and out of smaller income less will be saved" (Dillard 1948: 193). The assumption here is that the fall in investment will cause involuntary unemployment particularly due to rigid prices. Under normal circumstances, when people's time preferences rise, they demand more present consumption and are willing to sacrifice future consumption for its sake. The interest rate rises. Entrepreneurs respond by not maintaining capital: less time-intensive projects experience higher demand, and more time-intensive projects become less profitable. Production is restructured by becoming less roundabout. But this does not entail a change in income. Income simply does not depend on the relative shares of consumption and investment. Of course, workers are paid out of investment. But the entrepreneurs receive their money back by selling the finished goods. Gross investment or the revenues of business firms depend on the amount spent on consumer goods and the height of the structure of production (which Keynes does not countenance). Conversely, investment increases despite smaller consumption in money terms via the lengthening of the production structure and capital accumulation. Increase in gross investment therefore *lowers* the total money income to original factors of production, as well as of course prices of consumer goods, though not real income. How investment and consumption are divided up affects not income but the speed of economic growth.

A certain amount of money is Smith's savings at t_1 if at any later time t_2 Smith directly invests this money, i.e., attempts to profit with it by spending it on factors of production. As a corollary, it follows that one could not find out the amount of aggregate savings in the narrow sense in the economy until moment t_2 comes to be. According to this definition, investment at t_2 was savings at t_1. The savings represent a sacrifice of that present consumption, etc. that could have been enjoyed at t_2 or earlier but was not because of the decision to invest. Thus, Crusoe may be saving some of the fish he catches, but I am not concerned with the state of his mind while he is doing this. Only when he starts building a boat while using the saved fish to sustain himself while he works can the fish be called his (narrow) savings. The reason is that he is always free to change his mind as to how to utilize his extra

fish. Like so many other things, saving is revealed in and made definite by human actions. Only money kept for reason [H] and not the total money supply is considered to be a "hoard."

Besides *reasons* for saving, there are also *forms* of saving. One need not stockpile money but may keep various securities or items. Money shares with bonds, stocks, gold, other commodities, artwork, certain kinds of capital goods, cryptocurrencies one property: liquidity. Therefore, all these things can function as a store of value easily convertible into the medium of exchange. Investments, on the other hand, are extensions of *money* to factors of production since investments depend intimately on the ability of the businessmen to estimate costs and revenues. Again saving and investment can mean different things.

Savings can also go into the consumer loan market; people who buy cars on credit are hardly investors. During a credit expansion, banks cannot be considered savers, though their customers may be businessmen. As we can see, there are ways in which *S* can differ from *I* in meaning and amount.

19. That the quantity supplied of savings depends on the interest rate

Pp. 110-1 of *General Theory* lend themselves to several interpretations. Keynes writes: "The influence of changes in the rate of interest on the amount actually saved is of paramount importance, but *in the opposite direction* to that usually supposed." One possibility is that he's talking about hoarding. The higher the rate of interest, the less money will be hoarded, where by "saving" he means not a flow of funds out of income but a stock of hoarded cash. But this seems unlikely since dishoarding will increase investment, contrary to his argument.

Another idea is that Keynes confuses the equilibrium interest rate as determined by the supply of and demand for loanable funds and interest rate as the independent variable in the construction of the supply curve. It's true that if the supply of savings diminishes, the equilibrium interest rate will increase, and at that rate there will be less of both investment and saving. But that does not mean that the supply curve does not slope upward. Keynes writes: "even if it is the case that a rise in the rate of interest would cause the community to save more *out of a given income*, we can be quite sure that a rise in the rate of interest… will decrease the actual aggregate of savings" (*GT*: 111). If he means that this kind of shift in the supply curve diminishes income, then he is wrong. Income is consumption + investment. If one of these falls, the other rises by the same amount, perfectly preserving the income.

More plausibly, Keynes thought that though a low interest rate provides little incentive to the public to postpone consumption or part

with liquidity, nevertheless the entire reason why the interest rates are low is because of credit expansion by commercial banks on top of their fractional reserves. “Forced” savings have been injected into the economy, and the fact that voluntary savings are now scarcer is a mere symptom and irrelevant. Restraining the creation of money out of thin air may cause more voluntary lending to take place, but the interest rate will still be higher, and quantity borrowed lower than otherwise. A higher rate of interest offered by banks may still cause people to deposit more of their money into banks, but the shape of the supply of loanable funds curve depends on the policy of the central bank. “Savings” are superabundant, so we essentially slide down the demand curve until we reach the desired level of investment. The equilibrium is not the result of the intersection of two curves; rather the Fed picks the equilibrium it wants and adjusts the supply curve to obtain it. Hence the “opposite direction.” Keynes loves “investment” and hates “saving” which diminishes the “propensity to consume,” and this is a way for him to have the former without the latter.

Irving Fisher (1930) writes of the masses of workers that they “tend to spend rather than save” and suggests that “the great need and opportunity for education and thrift is manifest” (340). Keynes reverses this position, lampoons thrift, and glorifies spending. He does so because he is drunk with the power of the banks to expand credit with the help of the central bank through open-market operations which can apparently supply all the savings for all the investments one could possibly want. Why not then consume whatever is not “saved” in this manner and maximize aggregate demand?

Keynes does not locate the source of interest in time preferences which are consumers’ choices of how to allocate their money between consumption now and production now for the sake of consumption in the future. For him not-consuming is tantamount to hoarding. Even if there are such things as private savings channeled into investments (which seems hard to deny), there aren’t enough of them to drive the interest rate down to zero. In his vision, as we will see, only an economy in which the time needed to produce goods was of no consequence to the people could render employment full in the absolute sense. Keynes may not have been a thoroughgoing socialist, saying, for example, that “I see no reason to suppose that the existing system seriously misemploys the factors of production which are in use. … It is in determining the volume, not the direction, of actual employment that the existing system has broken down.” (*GT*: 379) But he still favored interventionism and inflation: as long as we are stuck with capitalism, at the very least monetary policy should be utilized in order to stimulate, i.e., increase the “volume” of, private investment.

There is yet another interpretation. For Keynes investment is the

main determinant of employment. An increase in the interest rate diminishes investment which translates into lower aggregate demand which, given rigid wages, entails unemployment. This in turn lowers incomes to the factors of production and hence both consumption and saving even if saving increases in proportion to the now lower overall income. Now the statement that (1) lower investment will decrease incomes is ambiguous. A rise in the interest rate in a sound money regime means a rise in time preferences. Such an event will decrease (a) *real* incomes / consumption / investment (b) in the *long run*. If (a) does not hold (and (b) does), then (1) is false: money incomes need not alter predictably as a result of higher time preferences. For example, a firm can acquire funds in two ways: by borrowing or attracting investment or through the sale of its products. Both of these can change in a variety of ways for different companies. If anything, lower investment will increase consumption and hence sales revenues and incomes to factors. If (b) does not hold (and (a) does), then (1) is false again: in the short run investment will decrease and consumption will pick up. Compared with the counterfactual situation in which time preferences are lower and there is more investment right now, at some point in the future there will be fewer of both capital and consumer goods. In other words, it is true that if the social rate of time preference rises, then there will be fewer goods in the future to consume. This would explain why real income would decrease in the long run, impoverishing a community by causing a drop both in consumption and in accumulation of actual capital goods. But in the short run, i.e., in the meantime, capital formation will suffer while immediate consumption will be given a boost. Aggregate demand is maintained throughout.

Keynes fell victim to his liquidity preference theory of interest, so he thinks that a rise in interest rates must be due to a higher (post-income reservation) demand for money, so the cash that was previously invested will now simply be hoarded. The resulting PL disequilibrium with rigid prices will indeed yield unemployment, etc. In such a case savings may indeed decline.

20. That Keynes' "psychological law" does not hold

The "law" claims that "men are disposed, as a rule and on the average, to increase their consumption as their income increases, but not as much as the increase in their income" (*GT*: 96). This law is a truism if we assume that the absolute amounts of consumption and investment do not decline from the time before the increase in income. Suppose that Smith's income was $5,000 / month, and he spent $3,000 and saved (in the wide sense) $2,000. If his income increases by $500,

then this $500 will be allocated between consumption and saving, e.g., $175 spent and $325 saved. Consumption has indeed increased by $175 which is indeed less than $500. That surely is a trivially deduced result.

Why, however, must the assumption hold true? Perhaps Smith decided to buy a house the very month he received his raise and in order to achieve his goal started saving a lot more. In this case he might now be spending only $1,500 per month and saving $4,000. His immediate consumption this month has thereby declined considerably. On the other hand, perhaps Smith has decided to "die broke." This end induced him to spend $6,500 and dissave $1,000 per month. Here his consumption has increased but by more than $500. Again, Smith may consider a new car to be unaffordable under the old income and suddenly within reach under the new income. The $500 / month raise will now result in a huge spending spree, far more than the mere $175. Workers probably consume most of their income, and business firms reinvest most of theirs. But there need not be any pattern to the spending by either of them.

There is further a difference between nominal and real income. The former may be defined as that amount of money received in a given period that can be spent without lessening one's net worth. But the whole point of net worth is to be able to convert it into real income, i.e., consumer goods and pleasure. Consumption therefore can be "autonomous," that is, independent of income and funded by cashing hoards and investments and also by borrowing. The simple reality is that at any moment it is open to a person to redistribute his income, net worth, and borrowed money toward consumption and saving however he chooses. No one is bound robotically to follow Keynes' formula during his life. A consumer does not need to evenly rotate any more than an entrepreneur does. "Consumption depends on income" is a crude formulation of the general proposition that allocation (of money) is guided by individual preferences in maximizing utility subject to budget constraints. The same reasoning applies if Keynes means real rather than money income. There is a greater abundance of both consumer and capital goods at lower prices in the economy relative to a previous state of affairs. Must Smith increase both his consumption and investment at the same time? Not at all. He can reallocate his money in any way whatsoever in response to the greater prosperity. No law obtains.

Perhaps Keynes meant that with more employment and hence more "income" there would be more of both consumer goods and producer goods. But that's true not because of any law, still less due to any psychology, but simply because new workers will be employed in different firms, some producing consumer goods and others investment goods. This is obvious because production of more consumer goods

requires an expansion in the investment goods industries.

In fact, there are no "psychological laws" at all. Humans are free to feel and act as they please. For example, there is no such thing as homosexuality among plants and animals. The desire to sodomize another would seem bizarre, even against an apparent law of nature. Yet Keynes was a homosexual. Imagine that.

That said, the "law" is true in the long term though not for psychological reasons. This is because economic progress entails providing for an increasingly more distant future, that is, *if* people want still greater prosperity (due allowance being made for time-saving inventions). To serve that purpose, gross saving and investment must continuously increase at the expense of consumption in money terms, causing a secular decline in interest rates.

Investment demand is neither necessarily more nor necessarily less unstable than consumer demand. In the short run much of the real-world economy evenly rotates, and the revenues to the entrepreneur generated by the sales of his products in the previous round of production are faithfully reinvested into the same factors in the next round. To the extent that creative advance takes place, investment spending is affected by optimism or pessimism (i.e., confidence) of entrepreneurs. Fear can dampen courage. But consumer spending too is affected by perceptions of pleasure and pain. It too is malleable. Hoarding can come from, and dishoarding into, either consumption or investment. Investment in money terms therefore has nothing to do with employment. All resources including labor can come to be in use regardless of the relation between consumption and gross investment. What matters for employment is that the supply of and demand for labor be in equilibrium.

Keynes seems aware of all this. Apart from the "subjective" factors influencing the savings rate enumerated in (I, 18), there are, Keynes argues, "objective" factors, as well, such as changes in the purchasing power of money and changes in time preferences. (*GT*: 91-5) But "since… the main background of subjective and social incentives changes slowly, whilst the short-period influence of changes in the rate of interest and the other objective factors is often of secondary importance, we are left with the conclusion that short-period changes in consumption largely depend on changes in the rate at which income… is being earned" (*GT*: 110). But then still the "law" is merely an empirical generalization. "People will not change their base rate of consumption and saving in the face of fluctuations of their incomes unless they decide to" hardly qualifies for the status of a law of human nature.

In a similar vein, it is true that investment drives saving to the extent that people save for the sake of investing (though they may save for other reasons, as well); investing is the end, and saving is a means to

that end. But it is certainly not true that the *present* level of investment determines the *future* level of saving because at any time people are free to change their ratio of present vs. future consumption. Moreover, saving takes time, and by the time one saves enough to invest, the opportunity he is contemplating may easily evaporate. To be sure, one can borrow, but this only means that *other people* have in the past saved enough in hopes that entrepreneurs would arise who would find these savings useful. In other words, the goal of investing follows the act of saving insofar as the former is a motive and reason for the latter.

If Keynes means that economic growth continues even as a society becomes richer, i.e., that people continue to save, or that growth is split between creative advance in the quantity and quality of both consumer and capital goods, then he is right, but this seems like a trivial point.

Dillard (1948) argues that "if Keynes' fundamental psychological law did not hold at all, any small increase in investment would set up a cumulative increase in effective demand which would go unchecked until full employment was reached; and any decrease in investment, however small, would set in motion a cumulative decrease in effective demand until everyone was out of a job" (96). The reasoning is that an increase in "investment" will boost "income," which will then be multiplied infinitely. And this is a reductio of this device. It's after all *possible* for a man to choose to consume the entirety of the increase of his income, and the same is true for a community. Surely, it's not true that in that case a small increase or decrease in investment will have such enormous, indeed grotesque, repercussions. Hence the "law" is irrelevant.

I want, however, to interpret Keynes' idea as charitably as I can. Perhaps what our author means is that rich people tend to save a higher percentage of their income than poor people do. There may be something to it. We can consider either (1) individuals in which case wealth equals their net worth expressed in *money*, or (2) society as a whole where wealth means consumer *goods and pleasures* available now and the production processes replenishing them.

For (1), whether one is rich or poor depends both on one's income and on one's rate of saving. A person with high income can easily spend himself into bankruptcy, while a person with low income can, through a high savings rate and prudent investments, join the upper class. In one sense the tendency holds by definition: rich people indeed save more or, better, have been saving more up till now, and that is precisely why they are rich (in terms of their net worth). Poor people, on the contrary, spend almost everything they earn, and that is why they are poor. This is a reason why (a) those who save a higher proportion of their income tend to be richer. But there is also a reason

why (b) those who are richer tend to save a higher proportion of their income.

Let Smith's income be $200 / month. He invests $10 and a month later obtains $20 in profit. This is a 200% return on investment and a 10% increase in his income with the savings / income ratio equal to 5%. Once all such high-yield investments are realized, in order to continue the same level of economic growth in the next period, namely, 10%, Smith will need to save more than $220 * 0.05 = $11 because the return will be smaller than 200%. Let's say he saves $15. His return is $22 / 15 = 147%, and the ratio of savings to income is 6.8% which is greater than 5%. In order to grow his wealth at the same rate, our now richer Smith has to sacrifice increasingly more immediate personal consumption. Investment by an individual thus is subject to diminishing returns. It is no doubt true that new investment opportunities arise all the time, and moreover the economy is so large that it dwarfs any single investor's personal wealth, but the point is still that given an array of such opportunities at any moment, the marginal dollar is put into increasingly less lucrative business firms. As a result, the poor get richer faster than the rich get richer.

With respect to (2), each new production endeavor satisfies in the hearts of the people less and less urgent needs. In order to "keep up" with previous increases in human happiness, the number of projects started and successfully completed needs to be on the perpetual increase.

First of all, the more capital and consumer goods there are in the economy, and the more lines of production are in operation, the greater the amount of time and effort and therefore real capital needed to maintain the existing economy. It is true of course that the addition of capital good *A* to a particular production process can make labor so much more efficient at maintaining capital good *B* within that process that the cost of maintaining both *A* and *B* together will be smaller than the cost of maintaining *B* alone without *A*. Thus, a durable and easily replaceable sharpening stone can reduce the time it takes Crusoe to sharpen his axe every day from 2 hours to 2 minutes. The longer physical structure of production has resulted in a shorter temporal structure. I only note that multiplication of processes will require more savings.

Second, richer communities have more capital accumulated per person and therefore longer production processes online. Now the most profitable investments are taken advantage of first. What remain, assuming no technological progress, are less and less valuable uses of capital. However, to reiterate the point made in (I, 6), the consumption sacrificed in order to finance economic expansion is no greater in a rich society than in a poor one. A poor Crusoe is tending to 5 projects; in

order to find the time to do a 6th one, he has to postpone the satisfactions derived from 2 projects he judges least important out of those 5. A rich Crusoe cares for 25 enterprises; in order to devote his efforts to 7 more, he has to postpone 9 of the least important of them. There is not enough information to deduce, if Crusoe had to choose between those 2 or 9 jobs, which combination he would consider to be more valuable.

Dillard argues that Keynes favored "socialization of investment" on the ground of "the secular decline in the marginal efficiency of capital" (MEC) (156). The more abundant capital is, the less each capital good contributes to production. Now futurists always predict gloom and doom and are usually wrong. Keynes is no exception in this case. For the positive MEC of a capital good is due to different entrepreneurial valuations of the good's prospective yield. The consuming public will probably never be satisfied with what it has, and winners in the competition improve consumer welfare. But there is always room for improvement, therefore for profits, therefore for positive MEC.

Samuelson (2005) points out that "the leaders in the growth race invest at least 20 percent of output in capital formation. By contrast, the poorest agrarian countries are often able to save only 5 percent of national income. Moreover, much of the low level of saving goes to provide the growing population with housing and simple tools." (241) This may be because the citizens of poor nations fail to take recourse to birth control. Their lack of what Mises called "moral restraint" causes the population always to press on the means of subsistence. The key points are (1) that the money is always invested in *new* capital formation, i.e., capital that did not exist before and which is expected to make production more efficient in terms of quality and quantity of consumer goods. (2) That the leaders in the growth rate are leaders precisely because they spurn present pleasures in order to provide for the future. (3) That it is not the case that the poorest countries are not "able" to save more as if they were up against a malevolent force that checked their capital accumulation, rather they choose to save little for their own reasons. Rich people and communities save more insofar as they may have taken the lesson to heart on how to stay rich and become richer still. However, regardless of this interpretation, economics is not psychology. Psychology describes the actual ends that people have and their reasons for those ends. But economics takes preferences as given or as ultimate givens and teaches how to satisfy as many of them as possible. We do not have to know the content of the ends to reason this way. Hence the "psychological law" is out of place in an economics treatise.

21. That the multiplier does not work

If in a certain time period someone's real income has increased by ΔY, and his consumption, by $0 < \Delta C < \Delta Y$ (supposing that Keynes' "psychological law" is somehow in force), then Keynes calls $\Delta C / \Delta Y$ the "marginal propensity to consume" (MPC). Assuming that income is expended on consumption and investment with no hoarding taking place, $\Delta Y = \Delta C + \Delta I$. Moreover, let $\Delta Y = k\Delta I$, where, as a simple calculation shows, $k = 1 / (1 - \text{MPC})$. Keynes' conclusion is that "when there is an increment of aggregate investment, income will increase by an amount which is k times the increment of investment." If MPC = 9/10, then "the multiplier k is 10; and the total employment caused by (e.g.) increased public works will be ten times the primary employment provided by the public works themselves…" (*GT*: 115ff).

The direction of causation that Keynes has in mind is as follows: I increases by ΔI which causes C to grow by $(k - 1)\Delta I$ and Y, by $k\Delta I$. For example, let $1 million be invested into some project to be spent on employing 100 men. Let each man receive $10,000 in income. Of this amount he will spend $9,000 and save $1,000 as per his MPC. Overall spending will be $900,000. These funds can be used in some other line of production to employ 90 men. These 90 will spend out of their combined income $810,000 and save $90,000, making it possible to employ 81 men on yet another project. And so on such that total employment is $100(1 + 0.9 + 0.9^2 + \ldots) = 1{,}000$ men which is 10 times the original number and whose total income is $10 million = $10\Delta I$.

The initial investment increases employment directly as the money is used to pay workers right away. The subsequent consumption can only increase it indirectly by increasing the demand for consumer goods and thus giving firms an incentive to expand. The equation of exchange, $MV = PQ$, is one of long-run equilibrium, but we can use it to make sense of unemployment disequilibrium. An increase in M by ΔI must result in the rise in either P or price level or Q or quantity. Under full employment it is only possible for P to rise, while under unemployment it will be Q that will rise, Keynes claims in essence. (It certainly doesn't follow that multiplying under full employment will mean that "there will be no point of stability and prices will rise without limit" (*GT*: 117).) This is because higher M will raise prices but not wages, at least immediately. But the higher employment will boost V as the new workers spend their wages. This will raise prices again and stimulate even more employment and still higher V, and so on until the labor market is in equilibrium. It's as if higher Q and higher V will pull each other up to full employment. The same effect can apparently be achieved if there is some initial dishoarding or increase in V. Now if,

according to Keynes, all it takes to fix unemployment, no matter how severe, is a bit of priming the pump (especially since the multiplier is "logical theory… which holds good continuously, without time-lag" (*GT*: 122)), why doesn't this remedy work in practice? Keynes argues that this is because MPC is usually less than 1. But there is a better explanation: the flaw in our reasoning is that higher incomes from the rise in V will be spent on the greater output, and prices need not rise continuously. A permanent institutional disequilibrium in the labor market cannot be cured that easily. In the case of cyclical unemployment, the multiplier is equally useless insofar as the mass losses during the bust must be liquidated, and reallocation of the malinvested resources takes time. This *real* problem cannot be solved with *monetary* measures.

It is certainly false that in the free market if the MPC is close to 1, then "small fluctuations in investment will lead to wide fluctuations in employment" (*GT*: 118). A theory of unemployment or business cycles based on this kind of trivial arithmetic does not deserve further scrutiny. If the decline in investment is accompanied by an increase in consumption, the effect will be to reshape the production structure; if it is accompanied by an increase in hoarding, the effect will be to lower the price level. Employment will be unaffected either way. Keynes rejects these trade-offs: "up to the point where full employment prevails, the growth of capital depends not at all on a low propensity to consume but is, on the contrary, held back by it" (*GT*: 372-3). Higher investment not only does not decrease consumption, he suggests, it increases it and also pays for itself in the form of savings that are automatically generated.

In discussing the multiplier, Keynes switches without giving notice between the consumption / investment trade-off and the spending / hoarding trade-off. Insofar as he focuses on the latter, the MPC is an infelicitous name, it should rather be called something like the "marginal propensity to spend" or MPS because it incorporates, or should, spending money on both consumer and producer goods. In this second case, the MPC measures both consumption and investment, and what remains is simply hoarded. We have seen, however, that there is no psychological law according to which any part of anyone's income must be hoarded, or dishoarded for that matter. Thus, Keynes seems to be presupposing a PL (or monetary) disequilibrium with rigid prices. If people hoard ("save") more, then the result *would* be general price deflation *if only* prices were flexible. But if prices are rigid, the output is cut, and there is unemployment. Investment and incomes drop exactly by the amount which was hoarded. Hence $S = I$ or perhaps $\Delta S = \Delta I$. On the other hand, if investment increases due to some monetary injection by the government through its public works, then people will eventually

hoard the entire amount of this stimulus. So there is an asymmetry: increased hoarding will result in less investment, but increased investment will result in more hoarding. This means that the PL disequilibrium will remain, and no permanent increase in employment will follow. The only solution seems to be for the government to tax these "savings" away and spend them again. In any case, to fix PL disequilibrium in the absence of price adjustments it is necessary to inject a sufficient amount of money ΔM to raise Q to the amount corresponding to full employment $(M + \Delta M)V/P$, where P is the stuck price level. Priming the pump won't do anything.

Let's illustrate Keynes' calculation by considering a small economy. Crusoe lives on his island with Friday, Smith, and Jones. Suppose that Crusoe has saved 10 gold ounces and has hired Friday to – with alcoholic breath – hoe his cabbages. Upon receiving his wage, Friday saves 1 g.o. and spends 9 g.o. on five of Smith's chicken pot pies. It does not matter whether the pies are already available and Friday is consuming them, or whether Friday hires Smith to bake them. In the first case, time reveals Smith to have been a good entrepreneur who has correctly anticipated Friday's demand for the pies. Smith must have himself saved enough to satisfy his present desires while he worked. In the second case, Friday is buying Smith's cooking services by advancing to him present goods, namely, money, and receiving in exchange future goods, namely, pies. Here Friday is the saver-investor-entrepreneur and the boss of Smith. Either way, trade is multiplied. Of the income thereby obtained, Smith saves 0.9 g.o. and spends 8.1 g.o. on Jones' tools. And on the process goes.

Now the events I have just described are perfectly great; continuous exchanges mean that people are *finding uses* for one another, they are "in sync," producing what is demanded and benefiting from each other's work. They could be reaping gains from specialization and division of labor: perhaps it pays for Crusoe to specialize in catching fish and use the excess on several occasions to buy Friday's axe, Smith's hammer, and Jones' pick which would have taken him longer or been altogether impossible for him to make by himself.

Observe how the introduction of money alters the situation. First, when Crusoe is trading his horses for Friday's cows under direct barter exchange, both men may have *reservation demand* for their goods stemming from those goods' use-value. As one item is exchanged for another, Crusoe's marginal disutility of losing an extra horse grows, while the utility of gaining a marginal cow declines, and vice versa for Friday. At some point the former will outweigh the latter, and the exchange will stop. But in the money economy there is no reservation demand because everyone is producing *solely* for other people's consumption. If Smith is a peanut farmer and has a ton of peanuts in his

warehouse, then he does not want any of them; he wants to move the entire stock.

Second, though money has utility as a store of value and for economic calculation, its primary mission is to facilitate exchange. Once Smith has received money for his goods, in order to benefit from this action, he must ultimately buy something. What the multiplier means then is that a single exchange of goods or labor for money will beget other exchanges (whose number will depend on the MPC) because money has no independent utility: it is only useful as a means to other goods (though (I, 15) argues that things are not so simple). If one person has found it in his interest to acquire money, then it is all but inevitable that he will spend it. And so will every person receiving the gold ounces.

Third, it is true that upgrading our two-man economy from barter to indirect exchange will yield little benefit. For example, eventually Crusoe will not want Friday's money because he knows, taking into account the use-value of his horses, that it is not worth it for him. But in an advanced economy involving billions of people, money is a means to a vast variety of goods and services, so a person receiving money is very likely to find something on which to spend it.

Unfortunately, in being so impressed with the power of the multiplier, Keynes has forgotten a much more primal problem. It is true that money does not depreciate or corrupt (= lose its essence), e.g., as apples do in the process of being eaten, and must somehow be exchanged. But what is to ensure that if I have money, then there will be goods out there for me to spend it on? And that once those goods are consumed, they will be replaced in the next round of production? And that production will be of those articles and services that are most urgently desired by money-holding consumers like me? That the social system of production is there and humming along cheerfully is just assumed. Yet the central problem of economics is precisely how most efficiently to set up human productive activities. In other words, how often or how many times a money unit changes hands is less important than the *value* of that money unit. Economic growth makes money more valuable by increasing the number of goods per capita and hence the money's purchasing power. Economic degeneration makes money less valuable because there are fewer things for which it can be exchanged. For example, in the Soviet Union people often preferred to be paid in vodka for work done rather than in money because shortages of goods frequently made money worthless. One could not count on being able to buy even vodka with the money! Hence a reversion to barter.

Now with this Keynes may agree but insist that *both* variables are vital. For example, if nobody is buying anything, then even a high purchasing power of money is of no use. That certainly is true, but the question then is *why* are goods not being sold? People have worked hard

for their money; why are they not spending it? There are only two possibilities: (1) consumer hoarding and (2) massive entrepreneurial errors. The former occurs in a depression; the latter are revealed in a depression. A crucial practical task of economists then is to prevent depressions before they occur and cure them after and if they occur. The claims I will defend in this book are (i) that the only way to avoid a bust or recession is not to ignite a boom in the first place, and moreover (ii) that once there is a bust, the markets must be allowed to repair themselves on their own even, and especially, if hoarding takes place. Hence, the multiplier is beside the point, Keynes ignores the elephants in the room.

On the other hand, if the four horsemen of the apocalypse come into the world riding in full gear, then once pestilence, famine, war, and tyranny have killed off 90% of the population and reduced the rest to subsistent living, of what use will a formerly rich man's hoard of gold be to him? If a government falls after a revolution, then who would want its defunct paper money? Can the multiplier save a society from destruction due to hyperinflation if the state is intent on bringing it about? Indeed, hyperinflation is marked, among other things, by a dramatic lowering of the demand for money and therefore by frenzied spending and frenzied multiplying, but no one would call it a happy state of affairs.

Keynes attributes to the humble multiplier the power to lift economies out of depressions. Yet the depressions Keynes has in mind, quite unbeknownst to him, are due to misalignments and distortions in the capital structure (caused by falsification of the rate of interest by banks). Plans are no longer well-coordinated. The number of exchanges diminishes. But it would be absurd to throw money on the problem: let, the government decrees, *whoever* spend as much money as can be printed on *whatever*. The failure of complementary factors to click into their places for producers will not go away as a result. The worthless companies must disappear, and prices and wages must adjust downward in proper relations to each other. It's as if Keynes saw in the economy *nothing but* money, and his monomaniacal diagnosis of insufficient spending and panacea of *more* spending ignore real problems.

In a famous and stunning passage Keynes writes:

> If the Treasury were to fill old bottles with banknotes, bury them at suitable depths in disused coal mines which are then filled up to the surface with town rubbish, and leave it to private enterprise on well-tried principles of *laissez-faire* to dig the notes up again…, there need be no more unemployment and, with the help of the repercussions, the real income of the community, and its capital wealth also, would probably become a good deal greater than it actually is. (*GT*: 129)

Keynes' argument is fantastical: (1) gold mining is clearly wasteful: it "not only adds nothing whatever to the real wealth of the world but involves the disutility of labor." (2) Precisely for that reason, it is "of greatest value and importance to civilization." (3) But with the end of laissez faire, there are other even more spectacular ways to waste human efforts, and those should be substituted for gold mining. (*GT*: 129-31) If we are not summarily to dismiss Keynes as insane, then his argument must be interpreted as follows. While the primary employment will be wasted, nevertheless the multiplied employment has a chance of being useful which will increase wealth. It is true that the first 100 men will be employed in a pointless task of digging up the banknotes, but the other 900 men whose labor will come to be in demand because of the multiplier effect can be expected to do some useful work. Now the first 100 men are employed as a result of an investment; the other 900 are employed because of consumption. The initial investment is superfluous and detracts from the argument especially if the investment produces nothing of value to the consumers. We can dispense with it altogether and change the scenario such that the government simply gives the first 100 men their million as a "welfare" handout. The government can keep taxes the same and spend more at the advice of "liberal" Keynesians, but it can also cut taxes and keep spending the same in hopes that the *people* will spend at the advice of "conservative" Keynesians (in both cases running deficits). Here we must say that the MPS = 10 (rather than the MPC). Stripped of all the details, Keynes' system can be reduced to the slogan "consumption stimulates production, and production stimulates consumption."

It's true that consumer spending causes companies to profit which allows them either to evenly rotate another round of production or to elect to produce something else. Under a noninflationary monetary regime, profits to some businessmen are often offset by losses to others. Printing money, on the other hand, appears to entail – happily – profits for everybody! Inflation turns stones into bread because everyone's production can expand, and scarcity of capital is a thing of the past. Or we can reason as follows. The bust reveals a momentous misallocation of resources. Entrepreneurs were expecting profits but are hemorrhaging money. But losses are due to high costs and low revenues. The factors of production are overpriced: workers have benefited at the expense of capitalists. Inflation overturns this trend by deceiving the workers (via lowering the purchasing power of their incomes) and increasing profits. We breathe a sigh of relief that the system works. However, first, the misallocation is genuine. The losses are not a pointless annoyance that the government can take away with spending. That would be treating the symptoms not the root cause. Those losses are telling us something, and that is that factors of production are not being employed in the best

interests of the consumers. People are attempting to produce the wrong stuff. If they are rewarded for it with "profits," then the antisocial behavior of the entrepreneurs will persist.

Again, Keynes argues that unless Crusoe is given his 10 gold ounces, he will not hire Friday who in turn will not buy Smith's pies who finally will not spend his earnings on Jones' tools. Worse still, if these *exchanges* are not made, then these items will not be *produced* in the first place. As a result, society will be to that extent poorer. People will sort of wander around like nearsighted cows, looking at each other but not seeing opportunities for social cooperation. It takes the government to whip them into recognizing each other as fellow human beings and initiating production and exchange. Even if the economy is working Ok, it can be accelerated still more by an injection of money.

The following objections are sufficient to dispose of the Keynesian catchphrase. First, demand does not mean merely "desire" or "need" but also the willingness and ability of the demander to satisfy his supplier. But a recipient of government largess did not earn his money; he got his paper dollars from the government; he is a thief, obtaining goods and services without supplying anything in return. However, theft does not create prosperity; if it did, then it would not be illegal. Let 90% of the population be on "welfare." With so many resources, both human and complementary to labor capital goods and land, doing worthless jobs like digging up banknotes, who except the most fanatical Keynesian will still maintain that this is a viable economy?

When Smith exchanges his good *X* for Jones' *Y*, both men find each other useful. Keynes is worried about the welfare of Smith if Jones refuses to exchange with him. One person's fearful refusal to buy seems to harm *two* people. He suggests that Jones be given money in order to get him to buy from Smith and kick-start more exchanges. An obvious ethical rejoinder is that *mutual consent* is required for any exchange. Smith may want Jones' entire stock of *Y* for a penny. If Jones refuses, is Smith harmed? Private property rights surely must be presupposed before studying any economic transactions.

Second, the people in an economy with a noninflationary commodity money standard do not suddenly forget how to cooperate. A key Keynesian error is that such an economy is underperforming when left by the state and central bank alone. An act of capitalist saving of *money* initiates production of novel capital *goods*. It is up to each individual to decide whether he will save and invest or consume (perhaps also by saving first if the desired consumer good is expensive). Therefore, it is the people who choose to become either entrepreneurs or workers, not the central bank, who determine how fast an economy will grow. It is true that the two acts, (1) saving of money and (2) production of intermediate goods may not interlock perfectly. But this

does not alter the fundamental "macroeconomic" fact that the saving of money and the creation of capital go in parallel. The total efforts in the economy devoted to growing it by means of novel capital accumulation respond to the public's savings in the narrow sense, that is, to money earmarked for investment. Capitalist saving is a *signal* to entrepreneurs to contract certain lines of production and redirect the resources thereby freed into definite other ones. But when narrow savings are increased artificially, via credit expansion, no time is given for new capital goods to be created. We will soon see what fateful things ensue as a result.

Further, a laissez-faire economy is not subject to business cycles, therefore to the bust, therefore to the alleged need to take the Keynesian medicine of fiscal policy to recover from the bust. It is precisely attempts to stimulate this economy that create the boom phase of business cycle and with it the inevitable bust phase of it. Trying magically to get something from nothing backfires.

The worst possible way to view the business cycle is as a time of rapid growth being mysteriously and irritatingly replaced with a period of stagnation. In fact, the boom is not growth at all but society setting itself up for a monumental failure whose reality will only manifest itself in the bust. The boom produces only *cancerous* growth, and the bust is the market body's attempt at self-correction. Hence if the multiplier effect has a significance, it is that if people are holding on to money because of deflationary expectations (i.e., during a depression), then recovery can begin as soon as a critical number of consumers and entrepreneurs come without error to believe that the prices and wages are generally as low as they are going to get. Then both consumption and investment can quickly get under way. There are various criteria for how low deflation will proceed, one of which is the social rate of risk preference. These criteria will be explored in further detail in (I, 43).

The multiplier grounds the policy of government deficit spending to increase income and employment in the face of a collapse of private investment demand. It's an argument for pump priming or "jump-starting the economy." In the first place, its utility presupposes Keynes' unemployment theory which is to be dismissed. Second, we have seen that it cannot alleviate (1) involuntary unemployment due to excessive real wages coercively maintained. Neither can it fix cyclical unemployment in terms of (2a) relative misalignment between wages and prices because those are caused by malinvestments which must be cleansed sooner or later, nor again (2b) absolute PL disequilibrium in a secondary deflation since to accomplish that it is not enough to inject a small amount of inflation-financed spending – spending has to be massive to affect the price level significantly. The purpose of pump priming then is to counteract business pessimism. But it's unclear whether the animal spirits can be reliably lifted with this remedy. It's

just as plausible to argue that the government should arrange for entertainment for the masses such as gladiatorial games to cheer everyone up. What is needed instead of society popping such dubious antidepressants is improvement in objective economic conditions such as liquidation of bad investments, readjustment of production to satisfy consumer preferences, interest rates reaching their correct values, equilibration of wages, and so on.

Long-term economic growth does not proceed according to the multiplier effect, either. Every instance of consumption presupposes prior saving and production. Friday's berries just before the exchange with Crusoe are Friday's capital goods. They must have been produced via several physical and temporal stages. What Crusoe does by buying the berries with his fish is he *affirms*, *rewards*, and *perpetuates* an existing mode of production, an ERE. He tells Friday: "You are doing great! Keep producing what you've been producing in the same way." Therefore, regardless of how many mutually beneficial exchanges our four marooned people will make, even given gains in productivity brought about by division of labor, new capital and new wealth cannot come into being by spending. For the economy to grow there needs to be increased investment *at the expense of* current consumption, that is, by *decreasing* the MPC (i.e., the ratio of consumption to income). Thus, having landed on his island, Crusoe sooner or later decides that he needs shelter and a fence to keep some sheep which he discovers live nearby. He had better start saving. Let Crusoe catch more fish than he needs in order to sate his hunger and dry the excess fish. At some point he will have enough saved in order to devote time to making tools such as (to reuse an example) an axe, a hammer, and a pick. Once these are finished, Crusoe will be able to build a shelter for himself and a fence for his future sheep with much greater ease. A sacrifice of consumption in the present has enabled Crusoe to set up longer wealth-generating production processes which yield more consumer goods in the future as compared to a counterfactual situation of Crusoe refusing to give up his leisure for catching the extra fish. Of course, now Crusoe has to spend time maintaining his capital, e.g., by sharpening the axe every day. But we can suppose that he invested well, i.e., that the tools pay for themselves in his subjective estimation.

Thus, at first, we have $Y_1 = (C_1 - \Delta X) + (I_1 + \Delta X)$, where I_1 is 0. Then after a period of time Y_1 increases by some amount ΔY such that $Y_2 = Y_1 + \Delta Y = C_2 + I_2$, where C_2 is not only greater than $C_1 - \Delta X$ but greater than C_1 which means that Crusoe is richer than before as a consumer. I_2 is now composed of the tools Crusoe has made which similarly means that Crusoe is richer than before as a producer. The savings of the fish have been transformed with the help of labor into investments into capital goods, namely, the tools, and new and

previously inaccessible consumer goods, namely, the shelter and the fence. It should be clear that the multiplier is a weird red herring.

22. That sinking funds are not a vicious form of saving

Depreciation of long-lived assets is a consequence of capital consumption. Some things like buildings deteriorate mostly due to the passage of time, others like machines and equipment mostly from use, especially since an idle object that is just sitting there rusting is not really a capital good.

Let the landlord of an apartment building rent it for, say, $10,000 / month income. But the building suffers wear and tear every month. Therefore, the landlord must either (1) spend a certain amount of money, say, $1,000, every month on upkeep, (2) let the building deteriorate without providing for its replacement after it becomes unrentable, or (3) again let it deteriorate yet set up a "sinking fund." In the first case the monthly income is lower, but the building lasts "forever"; in the second case the income is higher, but the lifespan is finite. The total worth of the building is the same in both cases.

This statement must be qualified. Any durable item used in production, such as a machine but even a house, will not conveniently depreciate by a set amount year in and year out. The remaining value of a machine depends on the surprising happenings that will alter the future states of the market. A changing economy will likely devalue the machine far quicker than its purely physical properties may suggest because technological progress and capital accumulation will allow competitors to use machines in the years ahead that are more efficient and steal one's customers away. The odds of some out-of-the-way turn of events in and of themselves diminish the capital value of the machine because the very possibility of its coming to be outshined by competitors as time goes on makes its potential buyers more wary. On the other hand, a house may benefit greatly from the gentrification of its neighborhood and even become more expensive next year than it was last. Depreciation is an accounting trick, it is useful for determining whether evenly rotating in the future for the durable goods owner is advised, but it has no economic meaning. Set depreciation is an ERE concept and not an outcome of human action.

The third case may arise if it is impossible to make repairs to the asset. Then, every month $1,000 might be saved into a sinking fund such that when the building is no longer serviceable, there is enough cash to buy or build a brand-new one. Keynes is worried that this money, while it is being accumulated, will be *hoarded* which may diminish his aggregate demand and cause unemployment. The greater

demand for money entails higher purchasing power of money, and prices and wages may fail to keep adjusting downward speedily enough to preserve full employment. “Financial prudence” or depreciating on the books by a greater amount than what the assets actually lose is condemned as part of the problem. Keynes goes so far as to attribute the Great Depression to this phenomenon, saying that “by 1929 after rapid capital expansion” much of the new investment went into sinking funds. (*GT*: 100) This argument is a variant of the underconsumptionist theories of the business cycle.

The first reaction to Keynes’ idea is the incredulous “Should people *not* have maintained capital?” If Keynes wanted still more “rapid capital expansion,” then even more money would have gone into capital formation, and present consumption would have declined to a still greater extent. It is equally implausible to believe that people made errors en masse and saved so much as to trigger the deepest depression in the U.S. history. Saving more than the amount by which an asset would depreciate in a certain world is simply a normal and socially non-malignant reaction to the non-ERE competitive reality. A judicious bit of insurance never hurt anybody including society as a whole.

Herein lies the beginning of the Keynesian censure of money’s function as a store of value. It is a preview of hot reproofs of “liquidity preference” among the people that seems to cause them neither to consume nor to invest.

For example, it is *conceivable* that there may be a sudden and seemingly uncaused fit of fear among the investors such that higher demand to hold cash balances due to hoarding into sinking funds results in losses to some entrepreneurs in a given round of production. As we will see, however, such a one-time convulsion is economically irrelevant. Unless price deflation comes to be *expected*, production and job creation will not subside. Even if there is some kind of hyperdeflation during an especially severe bust, this deflation is mostly due not to hoarding but to diminution of the money supply from the failures of fractional-reserve banks and the concomitant credit contraction. Under gold standard, in addition, price deflation stimulates gold mining which moderates the deflation.

At any rate, Keynes does not give enough credit to entrepreneurs. In the case of (2), a businessman will simply engage in an accounting procedure designed to give him an idea of his profit or loss. Has more been earned from sales than lost in capital consumption? No money is hoarded.

Now by saving a man brings a definite future good closer to solid reality. The more he saves, thereby forgoing immediate consumption, the less he waits. In the case of (3), we can distinguish between

a. waiting to resume consumption by spending one’s principal

plus interest income at some future date (which generates a normal upward-sloping supply of present goods line),

b. waiting for the right moment known in advance (which yields a vertical supply line, meaning that I'd be willing to lend the amount of money I'm waiting to spend at any positive interest rate), and
c. waiting for the right moment not known in advance (hoarding).

Saving for retirement, say, involves (b) or wanting to consume at the right moment, i.e., when one is old versus before when the timing would be wrong. Entrepreneurs can still predict what things the saver will want after he retires and produce them. He can receive interest both while he is accumulating and even afterward if he decides to get an annuity with his cash. One can loan his money both as he increases the stash and as he draws it down. Hence it is in the interest of the landlord to invest the money into bonds or even stocks, keeping it from being "idle." It is contrary to reason to expect hoarding. What's more, if depreciation is calculated correctly, then the future becomes certain, and the money *can* be loaned out with the provision that all of it is returned on the very day when the asset loses all value. Even if accumulation of money does occur, entrepreneurs will foresee the state of future demand and keep producing to such an extent as to enable the property owner to buy a new building (or enable a businessman to buy a new machine) as soon as the old one is no longer functional, and the sinking fund is ready to be spent. This corresponds to reason #3 for saving in (I, 18). Production does not subside but is merely redirected from cheaper goods to more expensive ones or from consumer goods to capital goods, which is why Keynes' concerns are unfounded.

23. That interest rate cannot be defined via marginal productivity of capital

For Keynes, the marginal efficiency of capital is the discount value that equalizes the cost of a marginal capital good with the total discounted product that the good can yield over its serviceable period. Thus, the higher the marginal revenue produced by a capital good, and the lower its cost, the higher the maximum discount rate must be in order to match the two values; the higher the interest rate can be below this maximum rate to make investing into that good still profitable; and the higher therefore the marginal efficiency of that good. Marginal efficiency of capital then defines a capital good's marginal product, entirely similar to the marginal product of a worker or nature, minus its

marginal cost, or return over cost. Since numerous factors are involved in making any product, it is not necessarily possible perfectly to isolate any factor's contribution. Still, a worker earns wages, and capital earns rents (while the entrepreneur obtains the income from the worker's output and quasi-rents from use of capital goods). The interest that has to be paid along with these costs depends upon the time it takes to complete production.

In an evenly rotating economy, the discount rate is precisely the interest rate. But if we were to define interest rate in this manner, then we would be helpless in a real economy in which profits and losses are allowed to distinguish between interest and entrepreneurial profit. Since there is in any economy a tendency toward equilibrium or eradication of profits, the interest rate is that ineliminable difference between the yield of a capital good over its lifetime and the cost of that good. The MEC is arbitraged away down to the interest rate, it does not determine the interest rate. As Keynes himself points out, "what the schedule of the marginal efficiency of capital tells us, is, not what the rate of interest is, but the point to which the output of new investment will be pushed, given the rate of interest" (*GT*: 184). Keynes' marginal efficiency discounts the cost plus *both* the interest and profit on it. Of course, that investment into a line of business will be increased until the returns drop to the rate of interest does not mean that this rate is determined solely by liquidity preferences, rather it is time preferences that fix it.

I concur therefore with Keynes about the two kinds of risk: the risk taken on by an entrepreneur and the risk taken on by a lender. The former risk is that the entrepreneur will fail to make a profit. If Smith has invested $1,000 in Widgets, Inc., then it is possible that he will lose some of his money. An entrepreneur who is such a loser I will call *imprudent*.

But the latter risk in principle is not supposed to exist at all because lending money is a transfer of property rights, an exchange of present goods for future goods. It is to be repaid with interest according to justice. The borrower *owes money* to the lender. It is his legal responsibility to pay off the debt, and failure to do so constitutes theft. After all, the lender does not share in the borrower's profits, why should he be exposed to his losses? (This economic difference gives rise to legal differences such as that creditors have first dibs over shareholders on the assets of a company that has declared bankruptcy.) A borrower who cannot or will not pay back the loan I will call *unjust*.

It is plain that the risk of investing into an imprudent person is quite similar to the risk of loaning money to an unjust person. An investor is taking both risks: he risks the possibility that he will fail to make a profit, in particular that the company he is putting money into is run by imprudent managers, but also that he will fail even to obtain the

interest return on his investment and that moreover he will lose the principal itself such that he would have been better off keeping his money in the bank. But so does a creditor: though he can or should be able to compel his debtor to pay up by force of law even if the latter is being unjust and resists, there is nevertheless an entrepreneurial aspect to lending. Since lending is still at least nominally distinguished from investing, the lender's risk must not be quite as high as the investor's risk, yet it still exists. Keynes aptly calls this situation "moral risk" (*GT*: 208n).

Keynes thinks that lenders seek to hedge moral risk by increasing interest rates. Since Keynes deplores relatively high interest rates (as well as the phenomenon of interest as such), this for him is a problem. Could we have satisfied him by reforming the bankruptcy laws, for example, to allow creditors to enslave the debtors until their debts are paid in full? If creditors are assured of their return, the "unjust borrower" risk premium will decline. Supply of loans will increase, and demand will decrease, lowering the interest rate.

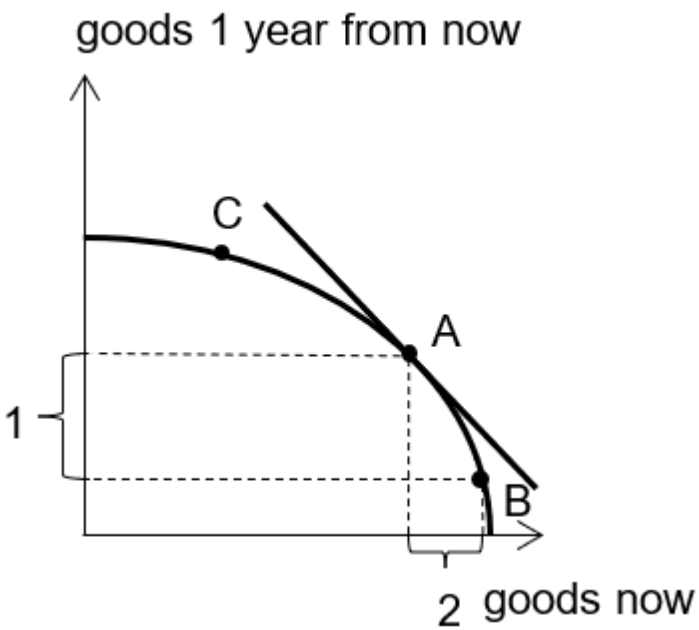

Figure I.23.1. The productivity theory of interest.

The productivity theory of interest is illustrated in Figure I.23.1. The quarterellipse is the production possibilities frontier (PPF) between goods produced this year and goods to be produced a year from now by means of a sacrifice in present consumption which is channeled into saving and investment. Point *A* is where the marginal rate of substitution is 1 beyond which (in the upper and leftward reaches of the

curve such as at point *C*) it no longer pays to convert present consumption into future consumption (because we would absurdly sacrifice more present goods for fewer future goods, or so it looks on this theory). If we start at point *B*, then if we save and invest the amount of goods equal to segment 2, then we will obtain more goods equal to segment 1 a year from now due to the shape of the PPF curve. Therefore, the length of 1 divided by the length of 2, call it *r*, is greater than 1, and therefore, $(r - 1)$, signifying the interest rate on the productivity theory of interest, is positive. The reason for the shape of the curve is supposed to be that at low levels of investment there are extremely profitable opportunities, but as investment increases, new enterprises become less and less productive, while the sacrifice of present goods becomes more and more disagreeable. Call this argument PTI.

Let the goods in question be grain only and let Smith's company invest into nondurable combines which make him more productive at harvesting crops. Smith saves 1,000 bushels of wheat this year which he sells for 1 gold ounce per bushel, with each combine costing 90 gold ounces. Suppose he spends it all on 10 combines (plus 100 ounces on the complementary to them goods and services) which cooperate to produce as many as 2,000 bushels next year. Upon selling them on the market, Smith consumes half and reinvests half. On the productivity theory the "interest rate" is 100% because 1,000 bushels this year have been converted into 2,000 bushels next year. It is plain, however, that the 1,000 extra bushels that Smith obtains next year is by no means interest but rather *profit*. It is precisely the failure of productivity theorists to notice this that has played havoc with their system. Indeed, this 100% return is a profit opportunity for other people in the economy. As competitors notice Smith's extremely high entrepreneurial gains, they will imitate him, causing (1) growing wheat to be more expensive by bidding up the prices of the factors that go into producing it such as labor and combines which become dearer due to increased demand, and (2) the wheat produced to be cheaper due to increased supply.

After all the profits are arbitraged away, Smith will realize that he can only buy as many factor services with his 2,000 bushels of wheat as to make 2,000 bushels next year, perhaps a bit more. Instead of doing that, he is better off just keeping the wheat in the granary until next year.

On the productivity theory it becomes impossible to draw a dividing line between interest and profit, that is, to identify either component in the set of incomes. In an evenly rotating economy, when we disallow profit and at the same time refuse to consider interest as being determined, as we will demonstrate, by a combination of time and

risk preferences but accept the productivity theory, we have an absurd but apparently possible scenario in which a person would take $10,000 that he already has and spread it out over a period of time, for example, by buying a capital good that yields an income of $1,000 per year over its life span of 10 years. This is because the marginal efficiency of the good can on this theory be arbitraged all the way down to zero. But production must go on. Since nobody in his right mind would ever do such a thing, our economy ceases to be a meaningful construction.

Further, what's productive is not capital goods but *methods* of production which utilize numerous factors including capital goods. Different methods of production have different productivity. Some "convert" $100 today to $110 a month hence, some to $200, and so on. One cannot derive the interest rate which is the same throughout the economy from these many numbers. In other words, the location of point *B*, and therefore the "interest rate," is indeterminate.

What must happen instead is that *less* money is used to buy a capital good than is yielded by that good over the period of its lifetime. This behavior of acting men is fully consistent with the fact that the good is productive or rather that the user of the good is more productive with it than he would be without it. In some sense and for some reason, therefore, *time* must cost *money*.

Regardless of how we conceive of "productivity," it is not a source of interest. If we mean physical productivity, then it can be anything whatever, such as 1 bushel of wheat planted this year generates 10 bushels next year, or a machine churns out 60 widgets each day, or new wine changes in quality with the passage of time. As a perfectly heterogeneous technological magnitude, it is irrelevant to the problem at hand. As regards the first example, that 1 bushel this year is traded for 10 a year later does not mean that the interest rate is 900%. Interest arises not in "exchanges with nature" but only in exchanges with other human beings in a money-using economy. Crusoe's gain is his psychic profit which cannot be measured, not interest. The illusion is easily dispelled: if 1 bushel of wheat could somehow grow into 10 bushels of flax, no numerical value could be attached to "interest" at all. Let's say Crusoe can fish or gather berries but not both. In that case the *opportunity cost* of fish is berries and vice versa. But we do not say that the *price* of fish is berries as it would be if Friday were on the scene offering a trade. For Crusoe alone there are subjective costs and profit and no objective prices or interest rate. One may as well say that when Crusoe builds a boat, he "exchanges with himself."

If we mean subjective utility, then it is the utility of the final consumer good that generates the utility of the capital used in making it, not vice versa, hence the value of capital is a dependent variable and does not itself determine interest. Indeed, the idea that the essence of

capital is that it can automatically produce greater value than could be produced without it is incoherent. Capital cannot "create value" of consumer goods because capital itself acquires value from the value of consumer goods, of course ascribed to those goods by the consumers.

If, finally, we mean value productivity expressed in money, such as when Smith, with his combines, parlays the 1,000 bushels of wheat this year into 500 bushels of rice next year that would sell at 4 gold ounces per bushel, then this value will be arbitraged down to the rate of interest and as such cannot explain the rate of interest. The value of a "highly productive" capital good will be fully reflected in its "high" price which will yet, mysteriously on the productivity theory, be lower than the price of the consumer good made with its help.

No less erroneous is it to call interest the "price of capital." As we will see, the price of capital, or rather of capital's services, is called rent not interest. But interest does enter into the determination of the prices of capital goods. If Smith buys a capital good from Jones, then he must take into account the time it will take to transform that good with the help of other inputs into a consumer good. The essence of a capital good is that it is incomplete, not ready for consumption, and the essence of its incompleteness is that it takes at least time and possibly other factors to advance it down the structure of production toward a good of the first order. This waiting time that must elapse is a fundamental defect inherent in any intermediate good. It reduces the good's price when it is sold on the market. The good will be discounted by the rate of interest (e.g., percent per year) times the amount of time (e.g., years).

Argument PTI assumes that each resource on the value scales can be either consumed or invested. If we start at the bottom of the value scales and go up, reallocating toward investing, then each resource will yield progressively more utility if it is consumed, and less utility if it is invested. This is indeed how an entrepreneur allocates his money in the real world. The argument is of no use, however, for finding out the interest income within the overall return obtained by the entrepreneur. In other words, (1) if the PPF curve has the equation $y = 3 - 3x$, then how big a part of the 200% return does interest constitute? No matter how few present goods are left, it is always open to a person to sacrifice them for the sake of greater future bounty unless such a sacrifice leads to his physical death. (And on the contrary any future pleasure can be postponed still further if the payoff in terms of immediate consumption seems high enough.) The marginal rate of substitution of future goods for present goods need never fall below 1. That is, (2) many entrepreneurs' curves will look like there is no point A on them at all; even if I wouldn't invest every penny I own because I prefer to consume in the present, I still could; there is no objective limit here. Finally, if there is such a point, then (3) an entrepreneur will always stop investing

long before it is reached rather than once it has been reached. By how much is precisely the problem. The reason is that providing for the future involves undergoing present austerity. If the conversion is to take place anyway, this sacrifice has to be compensated for.

24. That the reason for time preference and the partial cause of interest is disutility of waiting

The law of time preference (TP) is usually stated this way: present goods are preferred to future goods. Mises derives this law solely from the *meaning* of the act of consumption. Suppose, he says, that two goods are valued the same today and tomorrow. This is a crucial assumption, call it V, because without it we get into all sorts of trouble deciding whether the future good is actually a different good than the present good. For example, ice-in-winter is apparently a different commodity from ice-in-summer, a chocolate cake now is a different (and less valuable) good from a chocolate cake two days from now when I will have a birthday party. Or rather: it is the same *virtuous* good but different *pleasant* good. Thus, ex hypothesi, the good will yield the same amount of pleasure, however calculated, both today and tomorrow. Now if an acting man chooses to postpone his consumption today at t_1 till tomorrow at t_2, then tomorrow he will face the same choice as today: whether to consume at t_2 or again the next day at t_3. But the same logic that impelled the man to put off consumption till t_2 will with an equal force necessitate that he postpone it again until t_3, given that the situations are alike. We continue in this manner ad infinitum, resulting in an absurd situation in which the man never consumes. But the only way to prevent the regress is to deny on a priori grounds that it is possible for the man to fail to consume at t_1. Therefore, it would seem that present goods are apodictically preferred to identical future goods.

An objection may be lodged against this analysis to the effect that no two goods can ever be valued equally. Valuation is ranking. However, we postulate that Smith values virtuous good X the same at t_1 when t_1 is now and at t_2 when t_2 is now. There is nothing that prevents a good from yielding the same amount of utility at different presents. There is no such thing as a "choice" for *one* good made at *two* different moments, only a choice between at least two goods made at one – present – moment. Mises is arguing precisely that X at t_1 when t_1 is now must be valued differently and in fact more than X at t_2 when t_1 is now. Smith is temporally located at t_1 and chooses between (a) X-at-t_1 and (b) X-at-t_2. He must, Mises asserts, choose the former. Since X is the same pleasant good, the only difference between (a) and (b) is that for Smith

the first X is in the present, and the second X is in the future. This is the meaning of time preference or preference for present vs. future goods for Mises.

Another objection is that it is true that an act of consumption reveals that consumption now is preferred to consumption at any moment in the future, but it also reveals that it was preferred to consumption at any moment in the past. Mises (1996) himself points out that "there is in the course of a man's life a right moment for everything as well as a *too early* and *too late*" (486). But this presupposes *different* valuations of consuming at the "right" moment as opposed to at every "wrong" moment (i.e., either too early or too late), contrary to V.

In other words, Mises is constructing a peculiar algorithm. Let X = Later. Sooner < X. It is asked: Would you like to consume Sooner or X? If the answer is "sooner," then let X = Sooner, and let Sooner = Sooner – 1 (say, hour). Again we ask: Would you like to consumer Sooner or X? And so on until Sooner becomes Now. Since I cannot consume in the past, I must prefer to consume now to consuming at any later time. If the choice is X, then let Sooner = Later, and let $X = X + 1$. The same question is asked, but in this case Sooner will never become Now, and therefore I will never consume. Apparently, QED.

Unfortunately, Mises failed to realize that the question "Would you like to consume Sooner or X?" though it looks the same every iteration of the loop, is nevertheless always different given that its two variables take different values. Nothing stops a man from answering the question "Would you like to consume 23 hours from now or 24 hours from now?" "24 hours" even though for all Sooner > 23 he picked Sooner as the answer. Mises' error lies in the fact that the (true) negation of (false) "I always prefer to consume later than sooner" is not "I always prefer to consume sooner than later" but "Sometimes I prefer to consume sooner than later." Mises' proof amounts to saying that if a man has a motive, means, and opportunity to consume, then he will consume. He will not fail to consume for any reason including by postponing consumption. This, however, is hardly interesting. Again, while we *act* for the future, we *enjoy* and live only in the present, and so the statement that present goods are preferred to future goods turns out to be, according to the Mises' interpretation of it, as perfectly analytic as that enjoyment is preferred to lack of enjoyment. It seems therefore that we need to approach this problem differently.

Let Smith's income be $100k per year. He is considering buying a house worth $240k. "Necessities" of life, as far as Smith is concerned, take up $20k per year; in other words, Smith adamantly refuses to spend less than this amount. He is particularly attracted to the following three choices: (1) he saves $80k per year; or (2) he saves $60k per year; or (3) he decides against buying the house at all and spends the entire $100k

each year. Either way the house will be unavailable to him for at least 3 years. This fact is studied not by economics but by arithmetic. The difference between (1) and (2) is that in (2) his standard of living in the first 3 years is higher, but he has to wait an extra year to buy the house. The former is a benefit of choosing (2), the latter is a cost. Even if Smith chooses (2), the cost needs to be felt and given proper respect. This cost I term "disutility of waiting." If he chooses (3), then the disutility will be perpetual. Again, this is a cost, and on his deathbed Smith would have to reflect on his life and say: "Despite the fact that I never got to own a house, I have no regrets." It is a corollary of Misesian time preference that waiting, understood as the cost of a choice to save less and consume more in the present, has disutility, *and* the longer the wait, the greater the disutility.

Mises seems to anticipate this argument but counters that "impatience and the pains caused by waiting are certainly psychological phenomena. … However, the praxeological problem is in no way related to psychological issues." (486) I beg to differ. Consider the following deduction:

1. Men are not perfectly happy and have ends they want to attain.
2. The unattained ends cause them unease, suffering. The unsatisfied desires are eating at them, gnawing at them, demanding loudly to be quenched.
3. Even in moments when one is not conscious of a desire, one is still living in its "shadow": his thoughts and efforts are determined or conditioned by the desire nonetheless.
4. All things being equal, the less suffering and the more pleasure the better.
5. But suffering increases the longer it is felt. Even if a desire is not an *evil* but *potency*, pleasure is the *act* that fulfills it.
6. In other words, the period of time from Sooner to Later can be either peaceful or discontented, and everyone will prefer it to be peaceful (by virtue of the meaning of the terms "end," "action," "preference," etc.).
7. Therefore, waiting has disutility, and people always prefer to consume sooner, thereby relieving suffering quicker as opposed to slower.

Of course, if for any time period there are no desires, then there can be no satisfactions of those desires and therefore no positive time preference: if I do *not* want *X*, then I surely do not want *X either* sooner or later.

A seeming objection is that the alleged "disutility" is simply the unhappy feeling or longing resulting from not having the good desired.

It is just that the good is out of reach for a period of time. There is no special disutility of *waiting* apart from "dissatisfaction that lasts a while." It is not the waiting that is unpleasant but lacking ownership and enjoyment of the good. I agree completely and define disutility of waiting as snowballing misery from continual dissatisfaction as time goes on. The disutility I have in mind is always of not having good *G* over *T*, say, days. The point is that the disutility of waiting for *G* over fewer days is smaller than the comparable disutility over more days because greater overall suffering will be endured in the second case. The word "waiting" is used in order to underscore that *G* will usually materialize at some point. Time preference is not about preference for "present goods" over "future goods," it's about the preference for the same good *G* used for the satisfaction of the same desire *D* available now in the present over later in the future.

Disutility of waiting then is always relative to an opportunity forgone, a course of action not chosen. It is a cost inherent in preferring present consumption at the expense of some particular future enjoyment that gets inevitably postponed (perhaps indefinitely) as a result. Time preference refers to an individual's strategy of managing this disutility. Time preference is a *value*; even Crusoe alone on his island will experience this phenomenon; interest rate is a *price* agreed upon by at least two people as part of a mutually beneficial exchange through differences in their time preferences. For a beautiful example linking time preferences with interest rate see Rothbard 2004: 379-89.

There is the *personal discount rate* which can be expressed by saying that I'm "indifferent" between $100 now and $110 a year from now, and *psychic profit* if I trade $100 now for $115 a year from now. Then $5 is my consumer surplus. And then there is the *equilibrium interest rate* and *entrepreneurial profit*. If I borrow at 10% interest on the loan market and earn 15% return on investment, then my profit is 5%. These two sets of phenomena must be kept separate. One is a valuation of an individual, in fact if we disallow indifference as per the Austrian method, there is no discount "rate" to speak of; the other is a price arrived at in interpersonal exchange. However, we can say that that amount will be lent or borrowed by each individual that maximizes his total utility both in the present and future or until his marginal discount rate equals the interest rate. Neither the personal discount rate nor the equilibrium interest rate is a monetary phenomenon, but both are expressed as a ratio of two sums of money. Again, Crusoe will discount the future and have time preferences, but he will not encounter the interest rate as the point of intersection of supply and demand. "High" time preference means high "impatience," to use Irving Fisher's preferred term, greater present-orientation, higher personal discount rate of future goods; low time preference means greater future-

orientation.

There are then two senses of time preference: TP_1 refers to the general fact of preference of present goods to future goods. The value of any good at t_2 in the future is lower than the value of this good at t_1 now because with the good being available only at t_2 I have to spend the interval from t_1 to t_2 discontented. Again, I have desire *X* which will last a lifetime. I can satisfy *X* now or later. But what would be the reason to postpone my pleasure? If I satisfy it now, then I'll be happy in this respect from now until the end of my life. If I put off satisfying it for a year, then I'll be happy only between a year from now and the end of my life. It is an a priori truth that the former choice is preferable. For why avoidably endure dissatisfaction, "uneasiness," even pain from now till a year from now if I can instantly eliminate it? If I am to suffer such unpleasant things, I'd better be somehow compensated. This compensation is precisely interest income and is related to the second sense of time preference. TP_2 refers to the value scales of particular individuals. It answers the question just how one personally prefers to allocate his income between consumption and investment or loans. TP_1 shows that the *sign* of the interest rate is always positive, TP_2 shows how the *magnitude* of the interest rate is determined.

By putting $1,000 at 10% interest, I sacrifice $1,000 now for the sake of permanently increasing my (and my descendants') income by $100 a year forever. This entails an infinite amount of money, but since I have to wait increasingly longer for each successive $100, the discount rate of each such $100 also increases with time such that the entire sum converges to a finite value. TP_2 determines how much, if anything, I will lend at this interest rate. The choice determined by time preferences is this: I can satisfy desire *A* now and desire *B* never; or I can satisfy both 1 year from now; or I can satisfy *A* never, *B* a year from now, *C* 2 years from now, *D* 3 years from now, and so on. This isn't about the mere absolute subjective strength or vehemence of the desires. It is more painful to postpone the satisfaction of powerful desires, but the extra desires satisfied in the future by the present sacrifice can also be powerful. So strong feelings in themselves do not make one more present-oriented. However, as I go postponing satisfactions of desires like *A* for the sake of satisfactions of desires like *B*, the marginal present cost increases and the marginal future benefit declines. TP_2 determines the point of equilibrium.

The dreaded case of ice-in-winter and ice-in-summer can be assimilated to this reasoning as follows. I have a desire for ice in winter, such as for my margaritas, which, if unsatisfied, persists and turns into a desire for ice in summer, gradually increasing in intensity and urgency, and if satisfied in winter, is quelled permanently and keeps me happy in summer also. In this case, a fortiori, I'd like to get this desire fulfilled as

soon as possible such as on the first day of winter. As the problem is usually set up, however, it does not suggest that the desire for ice lasts a lifetime, in fact it seems to presuppose that the desire for ice in winter, even if not satisfied, is extinguished when the winter is over, and a brand-new and stronger desire arises in any case when summer arrives. Thus, time preference in the sense of TP_1 means a preference for satisfying the same enduring desire sooner rather than later. In other words, we should not be misled by the picture of an evenly rotating economy and identical desires within it periodically arising and periodically being satisfied. People eat every day; why should today's meal be any more important than tomorrow's? If I have one treat to be eaten either today or tomorrow, and on both days I will want it for 5 minutes, such that if I eat it, I'll feel a short burst of pleasure, and if I don't, the desire will go away on its own, then I am really indifferent when to consume the treat. Tomorrow's pleasure *is* as real as today's. There is no time preference. Time preference would arise, however, if my desire for the treat began today and persisted until tomorrow unless satisfied in which case it would be slaked for all time. Then you'd have to pay me interest to agree to postpone satisfying this desire until the next day.

It may be that two boxes of strawberries in summer are worth less to you in terms of subjective utility than one box in winter. But the desires satisfied by these boxes are not the same. Hence this is no objection to apodictically positive time preference. Suppose you had strawberries that were going to spoil if not consumed; is it an instance of a negative interest rate if you loan them at –5% in summer in order 6 months later in winter to sell them for +10% as compared with now? No, this is very similar to paying for storage to speculate on future conditions of supply and demand. It's not really a loan, which it would be if you sold the strawberries now and lent the money at interest.

If I have two apples and decide to eat one today and the other tomorrow thereby postponing some of my pleasure until later, does that contradict the law of TP? No, because presumably the desire satisfied by the second apple today is weaker than, and not identical to, the desire satisfied by the first apple tomorrow. The apple G is the same, the desires D_1 today and D_2 tomorrow differ. If, however, the desire for the second apple persisted unchanged until tomorrow, and if satisfied today would be fully placated and would not reappear tomorrow, then I would perforce eat the second apple today.

Frank O'Hara (1919), following Böhm-Bawerk, proposes two more reasons for time preference. The first is from marginal utility: people often expect to be richer in the future than they are presently. Let me have desire Y such that if I don't satisfy it now by spending $100, it will disappear in one hour. If I save the $100, however, then I

will have the means to satisfy desire *Z* that will arise one year from now and also last one hour. But if I'll enjoy more wealth in the future, then *Z* will be lower on my value scales, less important, less urgent than *Y*. This is a reason for me to spend now on *Y*. Of course, some people will anticipate getting poorer in the future. O'Hara replies that people can save present money to provide for future needs but not future money to provide for present needs. "The net result is that there is a relative shortage of present goods for supplying present wants as compared with future goods for supplying future wants, and, consequently, because of this shortage present goods are valued more highly than future goods." (192, §196) It seems to me, however, that the very act of reallocating present money for the satisfaction of future wants indicates that it is the present that is being discounted relative to the future. So, this argument won't fly.

Another reason is systematic devaluation of the future due to "our lack of imagination in regard to future wants, partly in the weakness of our will which results in our not making provision for the future which we know we ought to make, and partly in our realization that life is uncertain and that we may not be alive to enjoy the future goods" (193, §196). There is much to this point, but it cuts both ways. Experiencing pleasure makes us privilege the present, but experiencing pain or sorrow, whenever it is joined by hope, makes us reject the present and live in the future. But in life you win some and you lose some, so both pleasure and pain are ubiquitous. There is therefore no reason to believe that on the whole we tend to discount the future more than the present.

It's true that human foresight is limited; few men know what they'll be doing 20 years from now. But this fact does not demonstrate time preference because on such scales there is no opportunity for intertemporal exchange. There are no goods 20 years from now being presently contemplated and compared at all. Present consumption is the inevitable and only course of action.

Now it is a universal feature of production that it too takes time. An entrepreneur has an incentive to minimize production time in order to receive the revenue sooner, thereby realizing profit sooner, and the profit can then be consumed sooner. Different methods of production take different amounts of time to bear fruit. The longer any such method takes, the costlier it is.

Chick (1983) renders the "classical" theory of interest as regarding it "as a reward for 'waiting,' for putting-off consumption" (207). Mises (1996) counters: "There is in the world of reality no mythical agency that rewards or punishes." (846n) A man deprives himself of immediate pleasures not in order to strengthen his will or do penance in the hope of earning forgiveness from God but in order to

obtain the wherewithal to build or stimulate building capital goods to be used in those novel techniques that promise to bear relatively greater fruits. The abstinence is due entirely to a "selfish" calculation.

It is agreed by many Austrian economists that the fact that *labor* has disutility is an empirical observation because a world in which labor is pleasant is conceivable and possible even if it is not actual. It may be objected that labor is a means to an end. If labor were a source of utility, then there would be no reason ever to achieve the end, laboring would continue forever as an end in itself. If the means are not costly, then there is no need to economize on them but on the contrary a need to multiply them. If, far from being painful, labor is actually pleasant, then it becomes its own end, and that for the sake of which labor is supposedly expended need never come to pass. Indeed, if it is truly better to travel hopefully than to arrive, then arrival would be a bad event signifying an end to something good, namely, traveling or in our case working. It is true that working may be "fun," but that is beside the point which can be proven as follows. At any time, one would prefer to finish production to continuing working, otherwise the foregoing difficulties are upon us. In other words, one would for all n prefer to expend $n - 1$ units of labor to expending n units. Therefore, expending 0 units is best. Therefore, attaining the end by not working at all is better than attaining it by means of working. Hence all labor is a *cost*.

However, it could be that labor can have both its own utility as a kind of play *and* some external to it goal which provides, let us postulate, some massive amount of happiness, enough to justify ending one game for its sake and then possibly starting another. A hobby might qualify as such a thing. A man grows flowers which is a recreational activity he enjoys, but in addition he is aiming at a luscious garden. He is building a sandcastle which is entertainment for him, but he'd also appreciate a completed sandcastle. Then he is planning to go fishing, another pleasant diversion, but he is intending to stop when he's caught enough for dinner which he'd also enjoy. The two utilities may interfere with one another. The more one gives himself to playing, the more he risks forgetting the purpose attached to it. Conversely, the moment one focuses on the future end to be attained, keeping his eyes on the prize as it were, one is no longer immersed into his ecstatic self-forgetful present but considers the means to this end to be irritating exertion rather than simply a good time in themselves. But even if labor had utility, one could still maximize the overall happiness from both playing and at some point completing each game.

On the other hand, a world in which waiting has utility is utterly inconceivable, for it is a world in which people never consume but always wait to consume.

Incidentally, this discussion shows the implausibility of Keynes'

reasoning that "for a man who has long been unemployed some measure of labor, instead of involving disutility, may have a positive utility. … Pyramid-building, earthquakes, even wars may serve to increase wealth…" (*GT*: 128-9). Production and labor are not games. Keynes may have been fortunate, up until 1936, never to have experienced an earthquake or fought in a war; otherwise, he might have had second thoughts on the alleged delight that people feel from employing themselves at rebuilding their destroyed homes. Perhaps Keynes thinks that people can be energized by an emergency. Very well, let's change the scenario a little such that every time they rebuild, their cities again and again are destroyed by bombs. Surely, it will not be long before they finally get demoralized.

Goleman (2006) argues that "emotional skills" include "delaying gratification." However, time preference is a value-free notion. Neither the ant nor the grasshopper is praised or condemned. Economists consider TP to be as personal and subjective as a preference for vanilla vs. chocolate ice cream and moreover good when satisfied and bad when unsatisfied.

The source of *demand* for time lies in the utility of affording immediate consumption. The demand is in terms of money; the money that is paid for time is called interest. Demand for time is not demand for capital because capital is a *produced* factor combining *original* natural resources, land, labor, and time and therefore is more than time alone. If capital were reducible to time, it would mean that goods would pop into existence uncaused periodically. The reason to save and *supply* present money is the expectation that interest income will outweigh the more immediate sacrifices of consumption.

Another reason for consuming now is in the case of perishable goods, the perishable consumer, or the perishable desire. One eats his strawberries now or they will spoil tomorrow. One enjoys life today for tomorrow he dies. One grabs a candy bar now lest (he foresees) he will cease craving sweets five minutes from now. (The satisfaction of even such a transient urge is good because it brings superior *joy*, whereas its disappearance, mere inferior *peace*.) These examples are fine, but they do not demonstrate time preference because one is not choosing between goods in different time periods.

Further, consuming now may become the preferred behavior if any of the reasons for saving outlined in (I, 18) wane for a person. This does not contradict my explanation of what time preference affects; TP is only one factor among many others which determine the allocation of goods or pleasures over time.

It may be odd to think of time as a positive factor of production. It is true that the mere passage of time can improve something, as a harvest; in other words, creation by nature and human labor takes place

over time. But it is more often the case that time breaks things down. Depreciation of things can also happen due to time alone, work alone, or both. Even a machine that is just standing there idle is vulnerable to the entropic forces of time. Goods suffer from being exposed to the ravages of age. Depreciation of an item can have the technical sense of losing its essence, corrupting or economic sense of becoming less useful by either producing less value per time period or getting closer to being destroyed. Hence we obtain the four Ds of reasons for economizing time: disutility of waiting, depreciation, death, and dithering. In this book I will focus on the first and leave the other three by the side.

There are then two ways of profiting through intertemporal exchange. One can loan his money to a different consumer with a higher time preference for mutual gain, or one can embark upon production such that the value of the yield from the investment discounted by his rate of TP exceeds the value of the present investment. The individual time preferences give rise to the social rate of interest and the social structure of production. Let the interest rate be 10% / year. A man buys $100 worth of factors, combines them into a product, and sells the product for $120 a year from now. His entrepreneurial profit is $10; if in addition his personal discount rate is 5%, then his psychic profit or surplus is $15. In equilibrium entrepreneurial profits are arbitraged away, and the sales price will be $110. For consumer lending, lenders are suppliers of present money (or goods that can be bought with that money) and demanders of future money, while borrowers are demanders of present money and suppliers of future money. For production, capitalists are suppliers of present money while factors of production are demanders of present money. A capitalist buys the services of factors such as workers for $100 now, creates a finished product, and then sells this product *to the same factors* for $110 a year from now, pocketing interest. It is clear that this is a similar kind of mutually beneficial intertemporal trade to lending and borrowing on the consumer loan market. Capitalists choose to postpone their immediate consumption for the sake of interest return; workers, the reverse; so this too is an exchange. The workers agree to get less than “the full product of their labor” as long as they get it right away. In other words, the very workers paid by the capitalist are also the consumers. The reason why workers are paid less than the consumer goods are priced at is that workers are privileged to spend their money immediately (on whatever goods are available), while the capitalist has to wait until production is complete to receive interest, and *both* groups benefit from this arrangement. What finances production then is the accumulated stock of consumer goods since that is what the workers will buy with the money advanced to them by the capitalists. For consumer lending, the interest rate is the point of intersection between the supply of and demand for

loanable funds. For production, the greater the return on investment, the more savings capitalists will bring to the market, and at the same time the less willing the workers will be to take advantage of the opportunity (such as to get $100 in wages now only to pay $110 a year from now); so again the interest rate is determined by supply of savings and investment demand. Suppose time preferences rise. Both supply and demand shift upward. Some savers will turn into spenders, and some capitalists will become workers. At the old interest rate of 10% the quantity demanded of savings exceeds the quantity supplied: the workers cannot all get paid. So, insofar as workers set their wages, they will be bidding them down, and, insofar as capitalists set their prices, they will be bidding them up. The wage bill drops to, say, $98; the prices rise to yield $112. The interest rate rises to 14.3%. The opposite equilibration will occur if time preferences fall.

A man then can exchange his labor for a capitalist's money, becoming a demander of present money and receiving wages; then, with his new income, he can invest some of it, becoming a supplier of present money and receiving interest. Since these events are separated in time, the former being prior to the latter, there is no contradiction. (See Rothbard 2004: 410-6.)

An entrepreneur who borrows money seems at first glance to be a demander of present goods. But he also spends this money immediately by paying the factors, becoming a supplier of present goods. These cancel out. As a result, such an entrepreneur is not a capitalist at all, all his income is pure profit. In an ERE we can find out the interest rate by looking at the rate of return on investment. But in a real economy this cannot be done because each company is making its own unique profit or incurring its own unique loss. Hence the producer loan market, despite being a somewhat misleading phenomenon, together with the consumer loan market, is the source of the visible interest rate. That is, without either the consumer or producer loan market, there would be interest income obtained by capitalists, but there would be no way of separating interest from profit in a real economy and hence no way of gauging the interest rate. Even so, the way the producer loan market interest rate is determined is by the interactions of the TPs of the workers and capitalists producing goods and by investment banks gauging the risks of various loans. When we talk of interest as value spread between goods bought and goods transformed and sold, investment demand means the *factors'* demand for investment funds; when we talk of interest on the producer loan market, investment demand means the *entrepreneurs'* demand for money loans, and only the former exists in equilibrium. The supply curve of loanable funds includes both consumer lenders and capitalist savers, the demand curve both consumer borrowers and worker spenders. In the equilibrium

between the consumer loan market and production, there is a parity: lending is as lucrative as growing production. There capitalist savers get as much in interest income as consumer lenders.

There is an asymmetry between contract and economic interest in a real (as opposed to evenly rotating) economy in that unanticipated inflation will harm all creditors but may benefit some, though not all, capitalists who will receive higher money profits. Those capitalists who receive the new money first before other prices have risen will win, and those who receive it last will lose out. One reason why Keynes likes inflation is that it relieves the "burden of debt." But now that we see that an intertemporal exchange is a contract to transfer titles to property for *mutual* benefit of both the lender and borrower or capitalist and workers, it cannot be argued that stealing from one party, the creditor, to profit the other, the debtor, promotes *general* welfare.

Let my rate of discounting the future be 5% such that the present value of $105.26 a year from now for me is $100. If offered $100 now vs. $105 a year from now, then I might pick the latter. But if offered $100 *million* now vs. $105 million a year from now, then I would definitely pick the former. Why the inconsistency? Does my rate of discounting the future depend on my income or wealth? In order to see how TP works one must find a desire or set of desires that are being considered for satisfaction now or satisfaction later. Then one is to determine by how much the deal to postpone satisfying the desires must be sweetened in order to be picked. There must be a definite end that will be unattained with the help of the mere $100 million that *would* be attained by means of the $105 million. There must exist a basket of goods that I can afford only with the help of the marginal $5 million that is superior on my value scales to every basket of goods available without it. For example, if this offer is due to my winning the lottery, then the lottery owner might say: "Wait a year to get your money, and I'll throw in an extra mansion worth… *5 million dollars* [applause] in Beijing!" But the way in which I have phrased the puzzle leaves it unclear exactly on what the $5 million will be spent. It seems to be a trivial appendage to my otherwise huge win. "What can I buy with $105 million that I will not be able to afford with $100 million?" I am thinking. And I am making sense until I take this question seriously and calculate in full detail how I am going to spend the loot. If I do, then I might decide that I really do need the extra $5 million in order actualize my plans.

Conversely, why might I prefer $100 today to $110 tomorrow yet prefer $110 thirty-one days from now to $100 thirty days from now? The reason is that I have not looked so far into the future: I am not aware at this early stage of any end that is so urgent that I would be willing to satisfy it a day earlier and forgo a higher return just a single

day later. I literally cannot imagine thirty days before getting paid what I could be losing by waiting another day. Of course, this could be a premature judgment: as the day of the payoff approaches, my plans may solidify, and I might regret failing to account for the possibility that I would indeed find a use for the money – so good that the utility of quicker gratification outweighs the utility of the extra $10 – a day earlier later on.

With respect to disutility of waiting, more objections can be advanced. Consider the desire to travel to the Andromeda galaxy. It is never going to be satisfied. Should it be bothering me? Now to forget about a desire is inhuman: why not turn into a rock? But one may want to let go of an impossible dream, accept something one cannot change. Not traveling to Andromeda is not a reluctantly resigned-to cost of any feasible choice and therefore has no disutility. Immediately, however, we can ask: "Why not 'let go' of my desire for a given future good, as well? Why should I dwell on it when I know that I can only gratify myself a month from now?" Is it not enough for human action if a desire arises at the very moment when the action is completed? First of all, this is pretty hard to do: postponed desires persist and annoy, even grow stronger. One cannot really turn desires on or off at will. Moreover, if one has no interest in achieving a goal, can he stay motivated? If one programs himself somehow to start desiring at the completion of the work, then what happens if in the middle of the project he finds a way to finish it quicker? Will he be able to switch the desire on "manually"? These seem implausible. Second, even if one can let go of a desire, the opportunity cost of doing so is the persistence of *joy* for the duration of waiting if this desire had been satisfied. For privation of "joy" can take the forms of both "boredom" and "sorrow," just as privation of sight can be (1) blindness and (2) seeing illusions and being deceived by the sense of sight. One may be afflicted with the first even if he avoids the second. Disutility of waiting can take the form of boredom, as well. Suppose that I wish to observe a certain comet through a telescope. I know that it will arrive in the Earth's vicinity in three months. Here I am not laboring at all, just waiting for something good to happen. But if told that the original prediction was wrong and the comet would make its appearance two weeks sooner than expected, then I would still be overjoyed. The disutility of waiting in this case consists in absence of happiness (say, with the state of affairs of the comet's having been studied and knowledge of it, contemplated) not presence of pain.

The three major human feelings with economic relevance can be arranged as follows: *pleasure* (or *pain*) is the difference between present good and past evils suffered to bring about the good, *fear* (to be considered later) concerns anticipation of a future evil, and *hope* is anticipation of a future good. Interest is a creature of hope. A hopeful

person is conscious of a defect: he hopes to enjoy the good in the future but does not yet have it in his possession. Now hope is often linked with fortitude which makes it about what St. Thomas calls "arduous" goods, goods hard to obtain, goods that one labors to bring about. It follows that disutilities of waiting and labor are often suffered together in combination because the painfulness of waiting is often felt especially pointedly due to the fact that during the time spent waiting, one labors. Yet just as hope is distinct from fortitude, so waiting is distinct from labor.

In particular, patience is a related virtue because hope kindles or at least helps preserve desire, unsatisfied desires bring unhappiness, and a patient man's unhappiness is minimized while he waits. Patience then is not a "mild form of despair," it is assumed that one is fighting to achieve his goals.

Can one wait for a compound event of feeling a new desire in order to satisfy it instantly and enjoy it? It seems that there are enough of present wants to occupy the mind; no one really waits impatiently to be hungry just in order to enjoy food. Still, when going to sleep, am I not anticipating the pleasures of waking up in the morning? I look forward to feeling rested, seeing daylight, starting work, and having coffee under these circumstances. But I do not await the *desire* for coffee, i.e., how bad I would feel if I were deprived of the drink, only the *enjoyment* of it. In this case I am waiting for the right moment to consume.

One praxeological difference between past and future, though both are long intervals of time is that the past is a collection of events (happening to things), whose only temporal relationship with each other is the *qualitative* "before" and "after." The future, on the other hand, has another important aspect, namely, the actual amount or *quantity* of time that will pass between now and some future moment. This is because as one works on a project nearing it to completion, he waits for the future satisfaction and in so doing experiences disutility of waiting. Either pain of sense or pain of loss (i.e., absence of pleasure) is felt at every passing moment. The amount of time before a desire is satisfied matters. It is said that in heaven this aspect of time goes away.

It is true, finally, that *anticipation* of a pleasant event can itself be pleasant. But that does not negate the disutility of waiting because a pleasant event now is always preferred to thinking about that pleasant event. For example, G.E. Moore (2004) distinguishes between a "pleasant thought" which he says causes "desire" which might in turn result in "thoughts of pleasure." In fact, these three things are merely different ways of approaching the same phenomenon. To say that one (1) desires is to say that one wants to substitute one state of the world's affairs for another which he likes more. A (2) pleasant thought is

contemplation in one's imagination of that happy situation before it is realized. It is an essential component of the process of choice. One must consider which of the possible worlds that he can create by acting in various ways promises to be the most pleasant one, and one does that by imagining each of these worlds already actualized, i.e., by having (3) thoughts of pleasures. Imagination is a powerful enough faculty to supply an ephemeral approximation of the actual happiness that is still to be obtained. It is also tinged with sorrow because imagination hints not only at the future pleasure but also at the pain associated with the costs of attaining it. That future pleasure is picked for attainment the thought of which now is overall – costs taken into account – most pleasant. But a pleasant thought is pleasant only because one thinks of the actual happiness that the changed world will, it is hoped, surrender to him.

In addition, that pleasure sooner is preferred both to pleasure later and to daydreaming about the pleasure is not disturbed by the possibility that, occasionally, (thinking about pleasure + pleasure later) together may be preferred to pleasure sooner. This is a case when one prefers to "savor" his enjoyment.

25. That interest and rent are distinct

What brings about the phenomenon of universal positive time preference, of preferring present goods to future goods, is disutility of waiting. Satisfying a desire sooner is always preferable to living with it, to being "uneasy," unhappy, discontented, for a longer period of time. This is entailed by the meaning of economic terms such as pleasure and pain, end, and action.

On the loan market people with different time preferences benefit from each other's existence. In other words, what is sold on the loan market is neither money nor capital but *instant gratification* whose price is increased future hardship. "For the only reason why an asset offers a prospect of yielding during its life services having an aggregate value greater than its initial supply price is because it is *scarce*," says Keynes (*GT*: 213). No, the scarcity of an asset is the reason why its owner can charge *rent* on it or sell it at capitalized value; the reason why an asset yields more money over its lifetime than the asset costs, and the source of *interest*, is not that *it* is scarce but that *time* is, and is valuable.

Schumpeter (2010) considers interest to be simply lender's profit. Moreover, interest arises, Schumpeter claims, because the supply of money or "purchasing power" to be sold is limited, money is scarce. He is led into giving an argument in favor of inflation and credit expansion is as follows:

1. There is no development without credit. (See (I, 8) for more.)
2. There is no credit without money.
3. Interest is lender's profit.
4. There is interest because purchasing power, that is, money, is scarce; there is a definite limited supply of it.
5. Interest is a "break on development," a "tax on entrepreneurial profit," ripe to be objected to by any "critic of social conditions."
6. Hence society will benefit from less scarce money and credit.
7. Hence credit expansion is justified. (210-1)

Schumpeter should have realized that it is not money that is sold (how can it be sold when the borrower has to give it back?) but rather the opportunity to enjoy (for consumers) or act for the sake of future enjoyment (for producers) now as opposed to in some more or less distant future when the consumer or entrepreneur has personally completed saving the funds needed for the purchase. Interest is no more a hindrance to growth than the fact that most wage earners work 40 hours per week and enjoy leisure the rest of the time instead of working 80 hours per week producing more as a result.

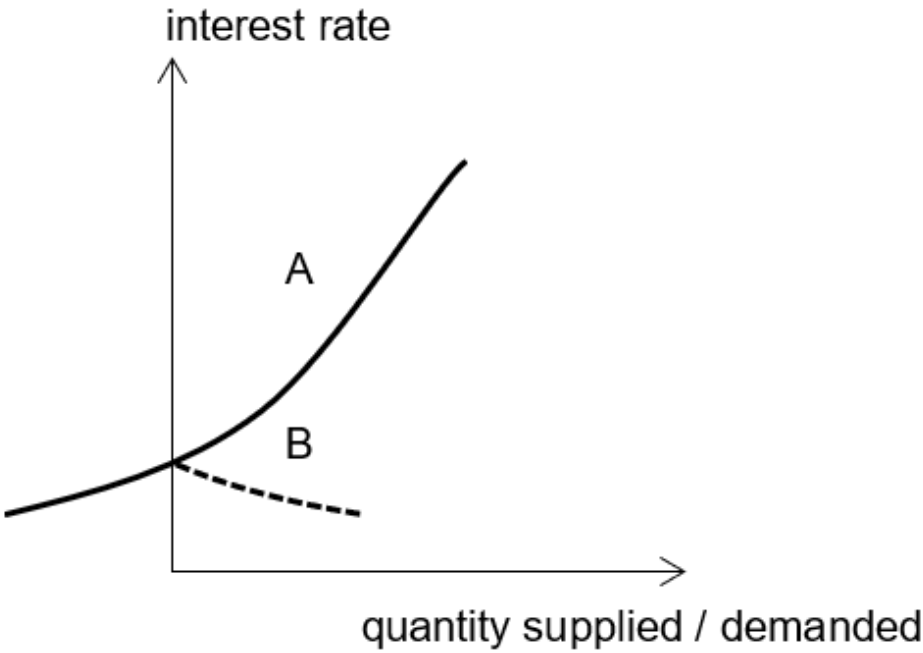

Figure I.25.1. Individual supply and demand for present money.

On the loan market some people supply present money and others demand it. Of course, nobody can be both a supplier of present money and a demander of present money at the same time, but one can

be a supplier at one, higher, interest rate and demander at another, lower, rate. This is because a higher interest rate increases the opportunity cost of immediate consumption. Each curve connects the amount of money out of one's income saved and loaned *or* borrowed and consumed with the interest rate. At high interest rates a person will be a lender or supplier of present goods (curve *A* in Figure I.25.1), and at low interest rates he will borrow and so demand present money (curve *B*). The supply of and demand for present goods are not independent of each other, being part of the same curve, with the demand curve mirrored from the 2nd quadrant into the 1st quadrant, resulting in its familiar shape. If the curve shifts, then if demand decreases, then supply increases, and vice versa. It is possible for a person to be neither a borrower nor lender at some interest rates.

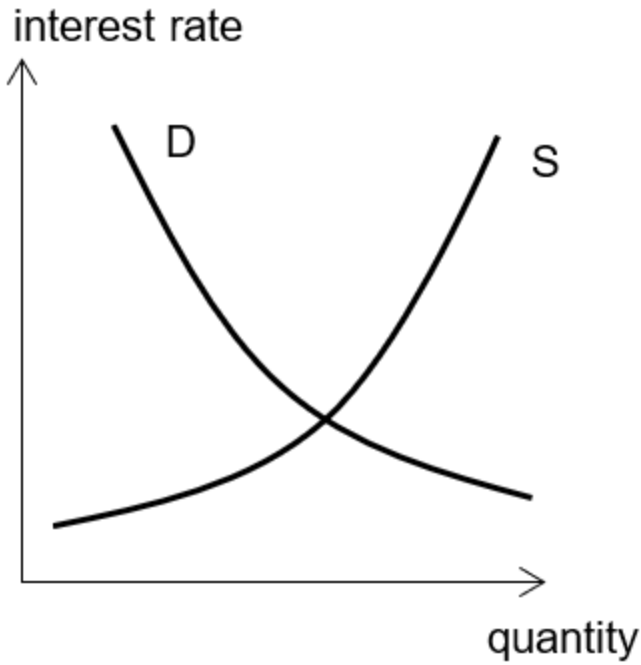

Figure I.25.2. Supply of (S) and demand for (D) present money.

The next step is to sum up or aggregate all the supply and demand curves of each individual into a single pair of curves relating the quantity supplied / demanded with the interest rate for the entire community, as seen in Figure I.25.2. Their intersection will yield the equilibrium interest rate at which the quantity supplied of present goods equals the quantity demanded of present goods.

It is instructive that Rothbard (2004) denied the importance of the loan market for understanding originary interest. In fact, he said it concealed reality: "Instead of being fundamentally suppliers of present

goods, capitalists are portrayed as demanders of present goods." (421) The producer loan market (PLM) arises only in a real economy and not in the ERE for people who like to invest on the margin, that is, try to profit with borrowed money. In each case money goes from the savers to the factors of production who consume what they earn through the mediation of the entrepreneur. Moreover, investment opportunities come and go quickly, and the loan market enables entrepreneurs to take advantage of an opportunity as soon as it is noticed, to "seize the day." Of course, if the loan market did not exist, then entrepreneurs would on average still be in the same position *relative to each other*. Thus, the PLM has social utility but does not necessarily benefit any particular capitalist. Finally, the PLM is useful as a means to flexible profit sharing: some people will want just interest but with the benefit of not putting their money at risk, and others will want profit but at the expense of exposing themselves to the full extent of business uncertainty and with it the possibility of loss. Even then entrepreneurs are properly net demanders of future goods, inasmuch as their return exceeds the market rate of interest, constituting pure profit, and this profit lies in the future.

The PLM is not without theoretical significance, however. There is in the entirety of the return on investment (profit) a pure interest component defined by time preference, but the interest *rate* can only be obtained by looking at the loan market (both consumer and producer).

Continuing this line of thought, the important loan market is the consumer loan market (CLM). The CLM is "subjective" insofar as decisions to consume now and pay the interest are weighed against decisions to save on one's own; the PLM is "objective": either the interest payments make the investment, when all costs and revenues are accounted for, profitable, or they do not. The result of the CLM transactions is a *scale* with a few values on it: one prefers to borrow and enjoy in the present to waiting less for future goods, or one prefers to save and retain full future income to postponing future pleasures for the sake of instant satisfaction; the result of the PLM transactions is a *number* representing either profit or loss. On the PLM a person is presented with an interest rate and can use it to calculate the cost of the time factor and weigh it against the expected revenue. If profit can still be had, it is reasonable to borrow; if not, not. Now it is true that even on the PLM values are compared: if an entrepreneur's time preferences are high enough, then he will consume rather than invest. But assuming investing, the point stands.

Though the PLM is irrelevant for understanding production in the ERE, as Rothbard has argued, its economic meaning is that it is an aspect of competition. If the demand for money loans by entrepreneurs rises due to some unusual wave of investor optimism, when numerous entrepreneurs perceive, rightly or not, high profit opportunities, the

interest rate will rise. Thus, the demand of entrepreneur-borrowers enters into the determination of the rate of interest as much as the demand of the consumer-borrowers.

The lender is influenced by both his time and risk / liquidity preferences (RP). The consumer-borrower deliberates regarding his TP only. The entrepreneur-borrower does not care about either TP or RP. And if there were such things as hoarder-borrowers, then those would care about RP only.

Though *rental* and *interest* incomes are distinct phenomena, there are enough similarities between them to make figuring out how they are different a tricky problem in economics. Rent can be of *space*, to allow other people to put things in it for a price, or of *goods* for their services. Rent is indeed the price of physical capital, and it is forever distinct from the additional fact about capital that it is incomplete or imperfect goods which yield their services over time rather than all at once; the use of one's machine, itself subject to forces of supply and demand, carries with it the separate extra cost for its user of waiting for it to complete its work, and that is the source of interest.

The confusion between interest and rent can be illustrated in the following scenario. Jones owns a certain object *C*. Smith wants this *C* for himself to use in his own business. The period of production is 1 month. At the end of the month Smith returns *C* to Jones. Question: What information do we need to discover whether *C* was *loaned* or *rented* to Smith? Or again let the interest rate be 5%. I have a microwave that I can rent to you in perpetuity for $5 a year. The capitalized value of the microwave is then $100. I can now sell the thing for this amount and loan out the money at 5%, again receiving $5 in income per year. Why is the first kind of income rent and the second interest? Why can I *rent* a microwave but not *loan* it, and *loan* money but not *rent* it?

First, renting *C* confers ownership of *C*'s *services* to Smith for a month, while keeping ownership of *C* itself in the hands of Jones. On the other hand, in a loan the property right to the money is fully transferred to the borrower.

The second clue lies in the timing of the payment. If Smith paid for *C* at the beginning of the month, then this suggests renting, if at the end of the month, then lending.

The third difference is whether *C* is allowed to depreciate through wear and tear. If not, i.e., if Smith must return *C* to Jones in the original condition, then it could have been loaned, but if *C* is allowed to depreciate from use, then it was probably rented. Money does not depreciate, goods usually do, hence money is a decent candidate for being loaned, and goods, for being rented.

The fourth difference depends on whether Jones, prior to letting go of *C*, had use for it himself. If not, then he rented *C*. Money always

has reservation demand for its owner who must decide whether to consume it or save and lend / invest it. A good need not have any use-value for its owner who might have produced it solely for other people's consumption.

Fifth, rent is paid for productivity, but money (formally as opposed to the material out of which money may be made) has no use-value and is not productive other than in its capacity as a store of value (SoV). Money serves as an SoV yielding services over time when it is hoarded. Hoarded money is not an "idle balance." This is because the *only* way in which money has use-value and "works" and is not idle at all in itself is via cash balances held out of the "precautionary" motive. However, if the money borrowed and hoarded is ever spent, then it will cease to be an SoV; at the same time if the contract stipulates that it cannot be spent, then it is not an SoV in the first place.

Sixth, borrowed money is immediately spent either on consumer wants or business needs of the borrower, whereas a rented good remains with the renter.

Rent then is for *use-value*. If one wanted to borrow money and hoard it, then the services of money could be thought to be rented from the lender. Contract interest on consumer loans and originary interest as return to capitalists are for *exchange-value*. And producer loans where one borrows in order to realize and to know that he has realized pure profit beyond mere interest income is for *calculation-value*. Goods have only use-value, money has all three.

Consequently, it seems that goods can only be rented, but money can be both rented and loaned. For example, it is easy to imagine a situation in which Robinson *loans* Smith money which Smith then uses to *rent C* from Jones.

This gives the lie to the idea that interest is a "payment for money and as such rewards no genuine sacrifice" (Dillard 1948: 195). The only way to make sense of that quote is to interpret it as a collage of two mistakes: first, that interest is rent; second, that money is usually rented. (Even if it is rented, if a cash balance has use-value as an SoV that allays one's fears of future uncertainty, it is unclear why renting it out is *not* a sacrifice.) Perhaps we can reinterpret this as the idea that interest is payment not for money but for the things money will buy, such as capital. Of course, that too is incorrect. Capital is a produced factor which combines time, natural resources, labor, and nature into an attractive bundle. How can interest on its own possibly be a payment for *all* these factors?

Another misunderstanding has to be guarded against. Rent is indeed often spoken of as income from land. But what is land? Its first meaning is "space," whether two- or three-dimensional. But for Marshall (1964) land means "all free gifts of nature, such as mines, fisheries, etc.,

which yield income" (66). That is just incoherent. For an acting man does not care whether a capital good he is using is original or produced. That is a datum of the past, and the past holds no interest for someone who calculates for the future and lives in the present. What the acting man does take into account is whether, once this good depreciates during production, it is replaced by nature, as it were, "automatically" and "on its own" or by human labor. Fish multiply, new coal keeps coming up underneath the coal that is taken away. He is interested in the question "Must additional resources be bought in order to *maintain* capital if one wants to continue evenly rotating for a spell?" Therefore land means not goods of the highest order that are just found and appropriated but rather the power of nature to replenish or improve those goods without human assistance. For one can usefully own that power in land, as well as owning the present free gifts of that power. The factors of production then are simply *space*, *nature* – insofar as nature, whether in its original state or in any way modified by man, possesses a modicum of creative power – *capital goods*, human *labor*, and *time*. Free gifts of nature are then produced factors, with nature being their producer.

It is sometimes asserted that the quantity of land is fixed and cannot be produced. This is only partially true. For plenty of land is still submarginal and not used at all. The deserts, the arctic are uninhabited. In some places they are already building artificial islands in the sea. But in any case humans can produce *access* to space and to the resources encased in it. Thus, tall buildings allow humans to live and work in points in space far above ground, ships allow travel upon the waves, and miners dig earth in order to get to the valuables beneath.

26. That interest and profit are distinct

Jörg Guido Hülsmann (2002) rejects the classical Austrian account of time preference and interest and substitutes his own notions. In what follows, I will critique his position and try to vindicate the theory of interest as arising out of positive time preference and the market for time.

Hülsmann begins by criticizing a theory of interest based on the idea that "human beings could not survive if they did not consume. Hence, there must be some time preference in human action, lest the human race would perish. … in order to survive human beings must, at some point, prefer shorter production processes to longer ones, even though the longer ones are more physically productive." (79-80) Hülsmann's first mistake is attributing this theory to Mises, when on pages 486-8 of *Human Action* Mises explicitly rejects this explanation as being fundamental to time preference. Again, it is true that the cost of

not continuously consuming necessities like food and water is infinite, no amount of future pleasure is sufficient to cause me to agree to die from starvation by failing to eat for too long. One must be alive to taste any pleasures. But the phenomenon of time preference is not exhausted by this trivial observation.

Having constructed this straw man, Hülsmann proceeds to refute it by referring to "warriors and martyrs" who "have the tendency to be oblivious of the physiological requirements of sustained life." I agree that though corpses have no desires, while a person is alive he is under no praxeological necessity to care for his life and health. But a martyr too presumably is concerned with the good of others or the whole society, loves these people as friends, and in so doing busies himself with goals that are expected to be consummated only after his death. Mises (1996) argues that in providing for others beyond the duration of one's own life, one alleviates "his own present dissatisfaction with the expected state of other people's affairs in various periods of the future" (499). Even a martyr does not waste his life by sacrificing himself for no good reason.

I would be hesitant to interpret Mises even as saying that consumption demonstrates time preference because all consumption by definition takes place in the present. This is true but toothless: yes, any enjoyment takes place in the now, so does any experience whatsoever, but it is not really because one *prefers* to enjoy now but because there is no way to enjoy anything at any time other than now. One cannot either choose or renounce the impossible. The basic point to grasp is that waiting, like labor, is not only a full-fledged factor of production but also, again like labor, has disutility. Not consuming $1,500 a month from now is an opportunity cost of consuming $1,000 presently. The opportunity cost is the persistence of unsatisfied desires which result in a discomfort, "uneasiness," sorrow from seeing a goal so close yet being unable to reach it for *more than* a month for the sake of some immediate pleasure.[16]

Let's start out with Mises' challenge to explain why some people invest $100 to receive $104 a year later, and other people do not. What accounts for the difference in behavior? Mises answers: time preference or preferring to be paid sooner rather than later. Hülsmann objects:

> Economic comparisons are not cast in terms of physical units, but in terms of choice alternatives, and choice alternatives are always heterogeneous. In the present case, therefore, the economic comparison does not involve different multiples of the same good, but two different goods. "104 dollars in one year" are for purposes of decision-making a good that is completely different from "100 dollars now" even though from a physical point of view these might be homogeneous quantities. Therefore

> there is no reason to assume that 104 future dollars are inherently preferable to 100 present dollars. (81)

Does Hülsmann mean that the situations now and a year from now will be different including the mental state of the actor and his economic environment? But Mises specifically points out that his explanation assumes other things being equal. "When are things ever equal?" Hülsmann might counter. But we are interested in theory where we have to untangle causes and effects, we do not necessarily need to jump straight into the complexities of a modern economy. Thus, the only differences in the two cases are (1) $104 vs. $100 and (2) future vs. present. That $104 is always preferred to $100 (assuming the extra $4 is useful for something) follows directly from its status as money and the law of marginal utility (both uncontroversial). Therefore, if $104 is not in fact preferred, then it must be because some evil or defect attaches to it that makes it less valuable than a smaller amount which lacks this evil. The only possibility is that the second difference plays a role: the gain lies in the future, and future money must be ranked lower on one's value scales than present money, so much lower (for some people) that even the extra $4 is spurned in favor of the present good. Similarly, if a person has a desire, then it is contrary to his nature to postpone its satisfaction for no good reason. If this satisfaction can be had for $100, then $100 sooner will always be preferred to $100 later.

Hülsmann complains that time preference does not explain "why the selling proceeds exceed the expenditures for factors of production." But time *is* a factor of production. Rothbard (2004) makes it abundantly clear: "all actions must take place through time. Therefore time is a *means* that man must use to arrive at his ends. It is a means that is omnipresent in all human action. … time is always scarce, and a means to be economized." (5; 15) Further: "Capital goods are vital and of crucial importance in production, but their production is, in the long run, imputable to land, labor, and time factors." (373) "Ultimately, only land, labor, and time factors earn net incomes." (481) And finally, "Capital goods have no independent productive power of their own; in the last analysis they are completely reducible to labor and land, which produced them, and time. Capital goods are 'stored-up' labor, land, and time; they are intermediate way stations on the road to the eventual attainment of the consumers' goods into which they are transformed." (58) There are land, labor, and time markets. (375) Thus, time is a scarce factor of production, it costs something. Capital is a combination, a package of labor, land, and time, so it is a produced factor. Even natural resources have to be *found* which takes employment of labor over time. Land and natural resources are essential factors because humans cannot create ex nihilo, they can only transform existing goods. Sometimes a natural resource is a consumer good, e.g., a cave used as

shelter. Otherwise, labor and time are essential to transforming nature's bounty into a consumer good. Sometimes a good will mature on its own as wine does, other times labor takes an infinitesimal amount of time such as driving in a nail with a nail gun. Most often, however, both labor and time are necessary.

Hülsmann concedes that time preference may indeed explain why a businessman would in any circumstances sell his product sooner rather than later or receive back money lent sooner rather than later. But, he continues, a lender would prefer to get his money back sooner even if the interest rate at which he had lent this money was 0% or –10%. "When I lend 100 ounces of gold now to receive 90 ounces in one year," he writes, "I thereby demonstrate my preference for having these 90 ounces from my debtor sooner rather than later." (85) In other words, it fails to explain the phenomenon of interest: positive time preference seems compatible with negative interest rates. It's true that 90 ounces are valued more 1 year from now (Hülsmann's "sooner") than 2 years from now (Hülsmann's "later"). But the TP theory of interest states also that 90 ounces now (my "sooner") are valued more than 90 ounces 1 year from now (my "later"), and a fortiori 100 ounces now are valued still more than 90 ounces 1 year from now. The exchange Hülsmann uses as an example, all things being equal, is irrational and does not demonstrate negative interest rates. It's as if he had proposed that a man could buy an item for $4 and then sell it for $3 and claimed that this story refuted the law of marginal utility.

Hülsmann goes on:

> The fact that we use a good right now always involves a time preference for this present use as compared to possible – but unrealized! – future uses of the same good. Hence, while time preference is an intertemporal aspect of each observed human action, in each single case it explains only the action under consideration. That is, it explains only *one* action. Money interest, though, as it is observed on the market results from at least two actions: purchase of means of production *and* sale of products; granting of credit *and* payment of principal and interest. The problem of interest theory is therefore to explain a particular relationship between at least two actions. (84)

Originary interest comes about as mutually beneficial intertemporal exchanges between capitalists and workers whose time preferences differ. Capitalists prefer to wait for the sake of receiving interest; workers want to consume right away at the cost of sharing the fruits of future production with the capitalists. Multiple people's different value scales give rise to supply and demand and hence to a single equilibrium price; similarly, people's time preferences give rise to the price we call

interest rate. This point escapes Hülsmann.

There is no "value spread between means [M] and ends [E]"; there is a value spread between end E_1 and end E_2 both of which could be attained with the same means M, whenever E_1 is preferred to E_2. The means have no value apart from the ends they serve, but it is not the case that "acting man… values the ends higher than he values the means." The crux of Hülsmann's theory is that unless there was an ineliminable difference between the ends and the means, there would be no action. But the fact that men act entails that some "interest" is being had. But if we add *time* to the combination of the means, this combination becomes identical with the end and is valued exactly the same. An end has been attained at just the point at which all the means used to attain it have been expended. Therefore, a union of all the means is valued equally with the end, including when value is expressed in money terms. Value then is fully imputed from the end to the means.

Hülsmann does differentiate "interest" from both psychic profit which he calls "gain" and entrepreneurial profit. But his contention that it results from a value spread between means and ends is untenable. There is no such value spread. Interest is not a third form of profit, or a different form of psychic profit, that Hülsmann newly discovered. To see that, consider the difference between psychic and monetary profit. The former cannot be arbitraged away; the very idea of such a thing is absurd. One acts if E_1 is preferred to E_2, sacrificing E_2 for the sake of E_1, or the other way around. There is action if and only if there is expectation of psychic profit. For example, Crusoe expends labor which has disutility for the sake of getting food, and relieving his hunger is worth the effort; hence (r_1 of satisfying hunger – c_1 of labor) is preferred to (r_2 of leisure – c_2 of staying hungry), and Crusoe enjoys psychic profit. But we can easily imagine monetary profit to be zero in an ERE, such as where factories are working robotically with no entrepreneurial direction. However, that neither interest nor psychic profit can be eliminated by the market process does not mean that they are the same thing. Even in an ERE both capitalists and workers receive psychic profits from trading at interest.

Hülsmann also suggests that interest is a form of monetary profit that cannot be equilibrated away because arbitrage "would entail personal disadvantages for the arbitrager" (99). I do not understand what that means. What disadvantages? Pure entrepreneurial profit is effortless and costless money, it's a reward solely for alertness, a flash of intellectual insight. Equilibration does force it down to *exactly* zero. Yet interest rates remain positive.

Interest is eliminated, Hülsmann says, when people pursue projects for their own sake such that the means and the ends are one. By that he means basically playing games. There is something to it, though

not for the reason he thinks. If I enjoyed producing steel, to use Hülsmann's example, for its own sake, then I presumably might be willing to pay for the privilege, such as by taking a monetary loss in this "game." Production for me would instead be a leisure activity, a consumer good. Time preference fully explains why interest does not arise in such cases: because there is no sacrifice of any immediate consumption. One who is playing a game for its own sake is enjoying it now. I'm not postponing consumption by investing into a steel factory for the sake of higher sales revenues in the future, I'm consuming right now. There is no need for interest.

Hülsmann claims to make sense of why exchanges are made. For example, Smith values his apple less than Jones' tomato, and Jones values his tomato less than Smith's apple. And the spread, according to Hülsmann, is interest. Of course, it is nothing of the sort; it is profit. There is a difference between the use-value and exchange-value of the objects being exchanged. When Smith exchanges his apple for Jones' tomato, Smith's *apple's* use-value is lower than Smith's anticipated *tomato's* use-value. But the apple's *exchange*-value is equal to the tomato's *use*-value, assuming no transaction costs. The value of the apple as a means equals the value of the tomato as an end.

Hülsmann argues that his theory explains "'negative money interest' resulting from philanthropic undertakings." But the standard time preference theory of interest also does so at least as well: the philanthropist suffers not only the loss of his donation but also the interest he could have earned on the time market, for example, by loaning the money to someone. Yet he finds the expression of his charity a greater value than even this combined loss. Even the case of the miser whose consistency with time preference Mises (1996: 490) admittedly failed to prove is easy to explain: the miser's satisfaction and consumption consist in contemplating his hoard rather than in spending it even on bare necessities. He prefers the loveliness of the glint of his gold coins to the food he could have bought with them. Must he be condemned for his eccentricity? Or perhaps the "pathological withering away of vital energy" can be interpreted as self-hatred, whereas economics reasonably presupposes that people love and will good to themselves. Alternatively, as we'll see in the next chapter, the miser can be seen as preferring *hoarding* to *both* consuming and investing.

In sum, time preference explains why the interest rate is positive, i.e., why people, lenders and borrowers on the consumer loan market and capitalists and workers, find it advantageous to exchange money at interest. In equilibrium there is no difference between the combined price of *all* factors of production and the price of finished output, and to the extent that there is a difference in a real economy, it is not interest but entrepreneurial profit.

27. That risk preference corresponds to hoarding; of the complete cause of interest

One's time preference answers the questions:

(T_1) How much is waiting less for a future good worth to me in terms of present suffering?
(T_2) How much more must I gain in the future in comparison with the present's even rotation in order to agree to abstain from some immediate pleasure?

One's *risk preference* answers the questions:

(R_1) How much is being prepared worth to me?
(R_2) How much security must I gain by hoarding my income in order to choose *not* to consume or invest my rainy-day savings?

Let risk preferences be "high" if one is very fearful and low otherwise. A person with a high risk preference prefers to "be prepared." He is the boy scout of the economy. He keeps a chest full of gold in his attic "just in case" or would if we had sound money. He avoids debt and pays all his bills on time and in full. He loathes inflation which diminishes his hoard. Etc.

On the contrary, a person with a low risk preference lives paycheck to paycheck. He likes to test his skill and luck. He is confident and optimistic. Since there is a trade-off between liquidity / security and profitability, he may keep his money in illiquid assets hoping to profit even if the assets are harder to convert to cash, should he, say, fall ill and require an expensive surgery.

A mnemonic is that low time preferences signify prudence, and low risk preferences, courage, and both are (cardinal) virtues. We saw in (I, 13-14) that these enable human action and facilitate success and consumption.

The future is not only by its meaning *remote* such that waiting for something pleasant is painful but also *uncertain* such that to live without a "cushion" of ready cash is for many people unbearable. Such people want the flexibility to handle unexpected changes that might come their way in the future, to keep their options open. They are prepared to sacrifice present consumption and even opportunities for future profit just in order not to expose themselves to ever-possible surprises. The *cause* of greater security seeking might be depression or a broken economy and the increased chance of losing one's business or job.

Hoarding is an increase in the demand to hold cash balances which is part of the demand for money generally. One's time preference dictates how one will balance less pleasure now vs. more pleasure a

definite amount of time from now, everything else being equal. Risk preference balances the pleasure from spending a given sum when things are well vs. from spending it when things are bad, or (e.g., $100 in) a good situation now vs. (the same $100 in) a possibly bad situation later (or more generally at an opportune time), everything else being equal. The latter is more valuable than the former. With risk preference there is no *trading off* consumption, there is a permanent reduction in consumption until the event insured against comes to pass, if at all.

The fear of losing money on the stock market is the same thing as the fear of not being prepared to meet unforeseen contingencies. If one's stocks are guaranteed to go up, then he can always convert them into cash on a moment's notice while at the same time making a profit. The problem is that one might need the money at an unpropitious moment, namely, when his stocks are (perhaps temporarily) down. The same holds for bonds and fluctuations in their prices.

In saying these things, I am not expressing any value judgments. There is nothing improper about the heart's desire for security in the face of the unknown and unpredictable. Some, namely, the entrepreneurial types, choose to embrace this uncertainty and boldly go where no one has gone before, hoping that their plans will win out against other entrepreneurs' similar endeavors. But numerous others pile up cash in order not to be taken aback by any contingencies. Is it better to be secure or to risk it? It's a matter of temperament. The market serves all kinds of people and does not privilege one temperament over any other.

Just as the personal time preference schedules give rise to the equilibrium interest rate which reflects people's taking advantage of the differences in these schedules and the *loan market*, so in a similar pattern the different risk preferences give rise to the *futures market* in which people who feel more confident in taking risks offer, for a price, to shield the more fearful from future uncertainty.

The overall fate of any amount of money can be decided as follows: one compares consuming $\$x$ now with investing it at a projected r% return (or lending it at a guaranteed r% return) and compares the winner with hoarding the $\$x$. Given the holy trinity of economics, namely, consumption, investment, and hoarding, interest can be conceived as that incentive that entices a person both to postpone consumption and to "part with liquidity." Suppose that Smith prefers investing at 10% / year to consuming now and also hoarding to investing at 10% / year. In that case he may need a higher return on investment, say, 15% / year, in order to impel him to invest. Here the 15% return is necessary to get Smith neither to consume nor to hoard.

Risk or liquidity preference expresses itself as a monetary phenomenon. One cannot realistically hoard apples, only money.

Hoarding is a type of consumption, though not of the money's exchange-value but of its use-value. Apples' use-value is their consumption. Money's use-value is precisely refraining from consumption understood as spending it, rather money's use-value lies in its power to shield one from future uncertainty, to satisfy the precautionary motive for saving. And money now at t_1 satisfies this motive more efficiently than money in the future at t_2 because it is available from t_1 to t_2 for use whereas future money is not. Money's exchange-value and use-value both strengthen the present value of money as opposed to its future value.

Time preference (TP) is the real aspect of the interest rate (IR), yielding interest proper, while risk preference (RP) is its monetary aspect, yielding essentially rent on cash balances. But they work together to establish the IR. In an evenly rotating economy, no one adds to or subtracts from his cash balance; the entirety of income is either consumed or invested, so RPs influence the IR only in a real economy with uncertainty, rivalry, etc. Lower TPs and lower RPs will both shift the curve in Figure I.25.1 to the right, the former because one will lend more and borrow less out of income at any interest rate, the latter because one will both lend more and consume more out of his cash balance.

When my TPs rise, I value future prosperity relatively less and am relatively more attached to present pleasures. At high IRs I will lend less, and at low IRs I will borrow more, consistent with my now greater privileging the present. As a result, the supply of loanable funds falls, and the demand for loanable funds rises. The equilibrium interest rate increases concomitantly.

When RPs rise, people become more fearful. This expresses itself in more hoarding. Suppose I receive income this month and want to increase my cash balance. At high IRs I will allocate money toward hoarding from lending and so will lend less; I will also consume less, so at low IRs the marginal utility of present goods rises which means that the utility of future goods has declined in comparison, and hence I will borrow more. In other words, at low IRs I will compensate for lowering my consumption for the sake of increasing my cash balance by borrowing more money. In addition, at low IRs I will want to borrow more in order to hoard. (If people can sacrifice present consumption for the sake of hoarding, there is no reason why they can't sacrifice future consumption for its sake.) The supply of loanable funds decreases because there is less money available for lending; the demand increases because, though consumption declines, borrowing increases. Hence the equilibrium interest rate rises once again.

This will happen *this* month; next month things will go back to their previous state with two differences. Since some money has been taken out of circulation, incomes will fall, as will the price level. (So we

have the phenomenon of an increase in the demand for money followed by price deflation.) Both supply and demand will decrease, preserving the old interest rate.

There is a crucial difference between consumption / investment and hoarding which is that in the aggregate people will consume and invest out of their incomes continuously, while paroxysms of hoarding and dishoarding occur only sporadically. Each such event changes the amount of money in the circular flow. For example, newly dishoarded money enters "circulation" and becomes a normal part of future incomes and expenditures including on both consumption and investment. Hence in the long run RPs are not relevant for the determination of the IR, though *changes* in risk preferences affect it.

As regards the structure of production, with higher RPs the interest rate will rise in the short term (due to lower wages) and fall in the long term (due to lower prices). Consumption and investment will decline proportionately according to the people's TPs, preserving the structure, that is, the whole thing will deflate. There is another non-ERE effect. With people more fearful, investors will magnify the terrors of losing money and discount the pleasures of making profits. So some high-risk, high-reward projects that before were embarked upon will now be spurned. There will be fewer entrepreneurs competing and hence higher profit margins for those who remain in business.

People can lend out of income, or they can lend out of their cash balances. In the first case they are not-consuming and *loaning* money, in the second not-hoarding and *renting* money. Likewise, people can borrow and spend, or they can borrow and hoard. Again, in the first case they are *borrowing*, in the second *renting*. Why would anyone borrow and hoard? One would rent some cash and keep it in a hoard for a "precautionary" reason, using it as a safeguard against future uncertainty. The hoarded money yields continuous psychic income to such a renter, just as a rented loom yields money income to a textile manufacturer. This isn't entirely implausible. There are then four combinations of these. (1) The first case, when people lend out of incomes and when people spend the borrowed money, is the normal type of loans. (2) If people lend out of cash balances to those who spend the money, this increases the supply of loanable funds and lowers the interest rate temporarily. The increase in the supply is a one-time event. But as the hoarded money is activated, two things happen (in money terms): income Y rises, and the velocity of circulation V rises which raises the price level P. The first effect raises the *supply* permanently since more money will be saved out of higher incomes; due to the second effect, with goods now more expensive, the *demand* for credit rises, and the interest rate comes back to its previous level. (3) If people lend out of income and the borrowed money is hoarded, then both Y

and V fall and so does P. Both supply of and demand for money loans decline in the long run, preserving the interest rate. (4) If people lend out of cash balances and the borrowed money is hoarded, both supply of and demand for credit rise in the short run, but, since the demand for money is unchanged, there is no effect on either Y or V, so supply and demand fall back again, maintaining the interest rate through both movements. As we can see, renting money on the side of either seller, buyer, or both has almost no effect on the interest rate in the longer run.

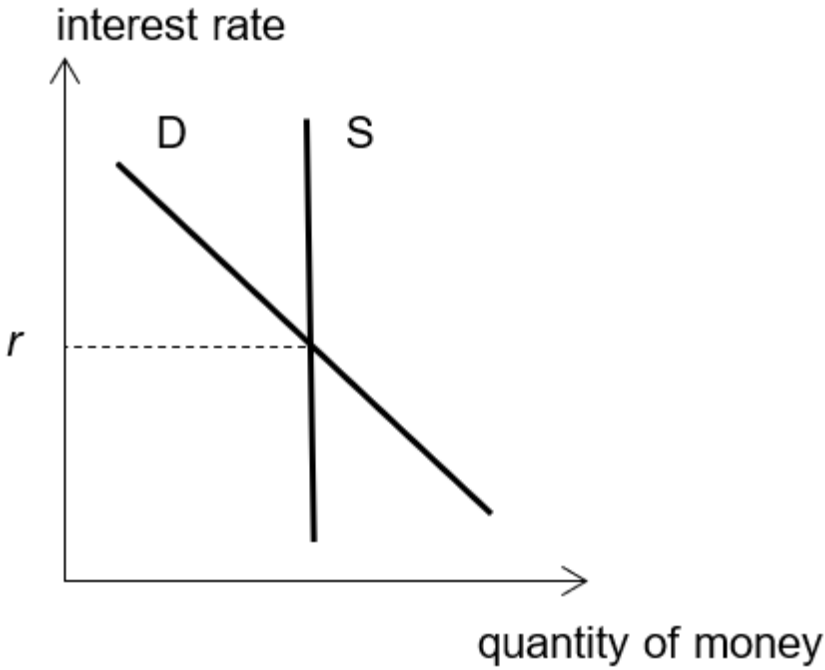

Figure I.27.1. Liquidity preference theory of interest. S is the supply of money; D is the demand; r is the equilibrium interest rate.

The Keynesian theory of interest is pictured in Figure I.27.1. We have seen that demand for money (D) is split between pre-income exchange demand (D_1) and post-income reservation demand (D_2). D_1 depends on the price level (or purchasing power of money) and is not directly affected by the interest rate. It might at first glance seem otherwise. A high rate of interest causes people to want to lend and discourages them from wanting to borrow. Doesn't this lower the demand for money? But demand for money is Q / V, and Q regards exchanges of money for goods, not intertemporal exchanges like loans. Indeed, it is not money that is traded on the loan market but intertemporal utilities or time. The borrower does not demand money at all, he spends it right away on consumer or capital goods. The lender does not demand money less, he wants it back with interest. But D_2, the

demand for cash balances, is affected. The higher the interest rate, the less out of my flow of income I will consume, and the less out of my stock of cash balance I will keep. The problem is that high interest rates cause people to dishoard and so have lower D_2, but dishoarding increases income Y and price level P which raises their D_1. These cancel out, such that the combined effect is that *overall* demand for money D does not depend on the interest rate after all: the demand for money curve is identical with the supply of money and so furnishes us with no equilibrium point. Instead, higher Y will shift supply because more will be saved at any interest rate; higher P will shift demand proportionately; the higher the interest rate, the greater the shifts. This is pictured in Figure I.27.2.

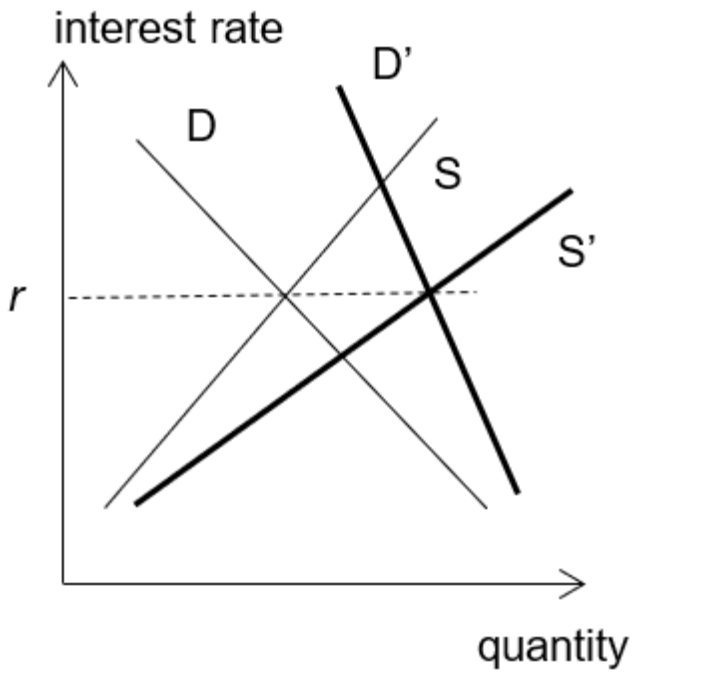

Figure I.27.2. Time and liquidity preferences combined.

Hoarding and dishoarding, i.e., changes in the demand for money, happen occasionally, are small in magnitude, and tend to offset each other. There is little room for practical mischief. Changes in the supply of money, on the other hand, have a much more momentous effect. Even under gold standard new gold is continually being mined with some of it finding its way into the loan market. Under fiat money the state can inflate at pleasure. And under fractional-reserve banking interest rate distortions are magnified manyfold. Thus, in addition to lending out of (1) *flow* of *income* and out of (2) *stock* of existing *cash balances*, there is also lending out of (3) *flow / stock* of *new money*.

Keynes shows awareness of both time and risk preferences. On p. 93 of *General Theory* he "approximates" the "rate of time-discounting, i.e., the ratio of exchange between present and future goods," to the rate of interest, saying only that real-world interest rates take into account expected monetary inflation or deflation. On p. 107 he connects interest with preferring "a larger real consumption at a later date to a smaller immediate consumption." Again on p. 107 he lists "building up a reserve against unforeseen contingencies," i.e., hoarding, to alleviate risk in life as a reason for saving. On p. 161 Keynes prefers that if one is "assailed by doubts concerning the future" and curtails his investments, then one should rather turn to consumption and avoid "the disastrous, cumulative, and far-reaching repercussions of its being open to him, when thus assailed by doubts, to spend his income neither on the one nor on the other," i.e., to hoard it. On p. 166 he discusses the two "decisions" that one must make in allocating one's money: the "propensity to consume" governs "for each individual how much of his income he will consume and how much he will reserve in *some* form of command over future consumption," and "liquidity-preference" answers the questions "Does he want to hold [the income left over after consumption] in the form of immediate, liquid command (i.e. in money or its equivalent)? Or is he prepared to part with immediate command for a specified or indefinite period, leaving it to future market conditions to determine on what terms he can, if necessary, convert deferred command over specific goods into immediate command over goods in general?" And on p. 174 he argues that "the concept of *Hoarding* may be regarded as a first approximation of the concept of *Liquidity-preference*."

Keynes claims that curves of the supply of and demand for loanable funds "tell us… what the rate of interest will have to be, if the level of income is to be maintained at a given figure (e.g. the level corresponding to full employment). … The traditional analysis has been aware that saving depends on income but it has overlooked the fact that income depends on investment, in such fashion that, when investment changes, income must necessarily change…" (*GT*: 181-4). As I understand him, under involuntary unemployment income can increase by an increase in investment (by means of government deficit spending) via the Keynesian multiplier. (Aggregate demand, that is, basically consumption and investment, and therefore saving and investment, determine employment. Far from saving increasing investment, it decreases consumption and lowers employment and income. Some such logic is required to explain Keynes' opinions.) Hence an increase in the demand for loans, for example, will increase income which will alter the supply of loans. The interest rate then is indeterminate. But we are interested in the determination of the interest rate first of all in the evenly rotating economy indeed under full employment. There income is

simply split between consumption and investment, and more of one entails less of the other. Second, I reject Keynes' assumption of permanent depression and unemployment under laissez faire. Third, even if the supply and demand curves depend on each other under unemployment, *given* what they are at any particular time, the interest rate *is* fully determinate. And finally, unemployment or not, Keynes' own liquidity preference theory of interest is wrong and does not solve the problem he poses.

This doesn't even matter. For specifically *cyclical* unemployment, with some people losing their jobs, V drops, lowering Y, so supply of credit diminishes (since less will be saved out of lower income). But in addition production and so Q decline, so demand for credit also falls (since there is less stuff including labor available for purchase). To the extent that the two effects happen in parallel and cancel out, the interest rate is unperturbed. For *involuntary* unemployment where P is kept above market-clearing levels, things are even simpler: Q drops, but PQ sticks around, so demand keeps; V and Y likewise stick around, so supply keeps. The interest rate again does not budge.

Every good, whether consumer or capital, for sale on the market offers a "reward for parting with liquidity." Surely, interest, a highly special phenomenon, cannot be assimilated to *that*. It is not the "price of money." Keynes may have been misled by the modern fractional-reserve banking system in which credit is created out of thin air and represents no sacrifice of immediate consumption. There banks charge "interest" literally for manufacturing new cash. But such an arrangement does not do away with interest any more than socialism, with its planned chaos, does away with supply and demand, or than government persecution of dissenters abolishes human rights. By spending money on a consumer good, a man renounces interest as much as he would if he hoarded the money. Interest is a reward for not consuming as much as for not hoarding. In a pure exchange equilibrium, such as when Smith trades his apples for Jones' cash, there is no time, and there is money only as a medium of exchange. In an evenly rotating economy with production, there is time and money in addition as a unit of account. And in the real economy with uncertainty about the future, there is time and money finally also as a store of value. But interest is present even in an ERE, yet money-as-SoV is absent from it. Hence interest has nothing to do with liquidity preferences per se. Keynes wanted to drive the interest rate down to zero, but he feared that, faced with such a price control, capitalists would not invest at this rate. Clearly, on his own reasoning, interest is more than a purely monetary phenomenon.

In short, ultimately the interest rate is determined solely by time preferences. Dishoarding, for example, will lower the interest rate in the very short run; in the longer run it changes only Y and P. Contra many

macro textbooks, then, the supply of and demand for money (as opposed to present vs. future money or loanable funds) determine not the interest rate à la Figure I.27.1 but the purchasing power of money. Monetary influences can perturb the interest rate away from its true value (which reflects the preferences of the consumers for satisfactions in less and more distant future) but briefly, and inflationary credit expansion can corrupt the market process of pricing instant vs. deferred gratification but with devastating consequences. Monetary shenanigans cannot abolish real interest. Keynes therefore has no theory of the determination of the long-run value of the rate of interest around which this rate will oscillate in the short run due to changes in the supply of and demand for money.

Keynes' mistake was thinking that driving risk preferences to zero (as if it were possible) would permanently lower the interest rate. What can stabilize the economy is the diminution of *fluctuations* in hoards. This is achieved in the long run by economic growth which grants men ever greater security against the sources of earthly evils and in the short run by the abolition of business cycles. The former cause is promoted by capitalism as opposed to socialism; the latter cause, by capitalism as opposed to interventionism.

28. That confidence can make or break investments

As the rate of interest corresponds to time preference, so the rate of confidence corresponds to risk preference. It was sufficient to analyze time preference within the confines of the evenly rotating economy. In order to understand risk preference and its related concepts, it is necessary to enter a real economy, one in which not only does production take time but also planning and estimation of profits are uncertain, i.e., liable to constant adjustments due to surprising or startling events. Recall that entrepreneurship requires both prudence and courage. While prudence does the planning for the future, courage by the essence of this virtue is used to counter surprises. Courage and confidence are opposed by fear by deficiency and blind contempt for danger by excess.

It is sometimes alleged that one marketing technique that companies use is attempts to sow "fear, uncertainty, and doubt" about their competitors' products. This is abbreviated as FUD. The fundamental point is that feeling FUD has disutility. Now it would be mistaken to try to prove this by saying simply that fear, worry, doubt, etc. are "negative emotions." For that need not at all be the case. Fear of dying is usually healthy, fear of doing evil is praiseworthy, a roller coaster ride can be scary but also fun, doubt is perfectly fine if it keeps

one from believing a falsehood or if it impels one to investigate the matter for himself. This list can be extended. However, what FUD does is it may cause one to be *paralyzed* in the face of the unpredictable. It makes one weaker, less efficient, slower at dealing with unexpected troubles.

Again, there are two kinds of fear. First is fear_1 of transgressing the moral law. One has duties to others and must go through with them. Sin, moral evil harm the evildoer himself, and fearing this is highly constructive. The servile fear of not conforming to natural law and filial fear of not conforming to one's moral ideals (self- or grace-generated), i.e., of being unjust, are key virtues.

But another kind of fear_2 refers not to one's determination to persevere in moral goodness but instead to incapacitating terror or anxiety about one's ability to attain an end. It is no longer something that drives one to improve *morally* but is a real obstacle to improving *physically*. We might say that a frightened person "freezes" in place, unable to act. Now a duty or good lifestyle or character is precisely something that ought not to change. It *should* be frozen. Though fear of the law is not a cardinal virtue, and not especially fun, it is the foundation on which all higher virtues are built. A fearless desperado can be said to hack at the root of his own soul. On the other hand, boldness heats up life which flows readily from less to more happy. In other words, sometimes one does not distinguish between a virtue that he must fear to lose and suffering that he must intrepidly triumph over. One ought to fear falling to temptations not to perform a duty, but one ought to be bold as a lion while executing an action according to plan. Sometimes, however, fear can seep from an area in which it is an asset into an area where it is counterproductive.

A man can fight for several reasons: for survival; through natural joy in roughhousing; imprudently, without knowing the dangers or judging them correctly; when cornered, when there is no hope of escape; in anger, especially at an injustice or slight; in shame upon being called a coward; dispassionately, when he knows that he will win easily; and others. Fighting for these reasons is not really brave. Let me suggest that a brave man is he who prevents any fear_2 that he may feel from negatively affecting his performance for a worthy cause.

Offensive actions bring with them an abundance of fear_2, insofar as a brave man puts himself into dangerous situations. Fear_2 gives rise to building up one's defenses, in particular by mastering the arduous and difficult tasks at hand, becoming competent. This reduces fear and permits the person to act still more courageously. Fear_2, though usually unpleasant, is useful because in conquering it, one improves in both defense and offense. Bravery then has two aspects. First, it is not letting one's fears choke and repress him; second, it is mastering oneself and

one's environment in order to diminish similar fears in the future.

Even if one's calculations are impeccable, should some danger arise that requires quick action, boldness, and even intimidation to overcome, one may easily end up cowering under the bed in which case no amount of favorable probabilities will save the investment. St. Thomas argues in this way:

> The act of fortitude is twofold, aggression and endurance. Now two things are required for the act of aggression. The first regards preparation of the mind and consists in one's having a mind ready for aggression. On this respect Tully mentions "confidence," of which he says… that "with this the mind is much assured and firmly hopeful in great and honorable undertakings."
>
> The second regards the accomplishment of the deed and consists in not failing to accomplish what one has confidently begun. On this respect Tully mentions "magnificence," which he describes as being "the discussion and administration," i.e., accomplishment "of great and lofty undertakings, with a certain broad and noble purpose of mind," so as to combine execution with greatness of purpose. (*ST*: II-II, 128, 1)

A superb piece of advice to all aspiring entrepreneurs. "Hope whereby one confides in God is accounted a theological virtue… But by confidence which here is accounted a part of fortitude, man hopes in himself." (Ibid.: reply 2) God gives man a chance, sometimes more than one, St. Thomas seems to be saying, but it is man who has to make best use of it. God helps those who help themselves, etc. In short, the reason for the disutility of FUD lies in FUD's essential ability to hinder victorious action. He who fears will not give 100% to the task at hand; will fail to take advantage of momentary opportunities in his environment; will be self-conscious and unable to use his training to act with a killer instinct and with self-forgetful virtuosity; will experience moral doubts about himself and again fail to be appropriately ruthless and win-at-all-costs single-minded; will perversely favor defense over offense, fearing attack from everywhere which will waste and dissipate his efforts; will not be able to make his *enemy* afraid of him; and will make himself more prone to losing. Worrying that the future will bring undetermined gloom and doom makes one powerless and scatterbrained, lacking presence of mind, and, since action is an expression of directed power, incapable of responding properly to danger or emergency.

Cassidy (2009) recounts an experiment by Colin Camerer, in which the subjects were asked to choose between a *risky* action and an *uncertain* one. The former had a definite probability assigned to it, on

the other hand nothing was known about the latter: the probability of winning could, for all the subjects knew, have ranged from 0 to 1. Camerer's conclusion was that "the brain doesn't like ambiguous situations. When it can't figure out what is happening, the amygdala transmits fear to the orbitofrontal cortex." (203)[17]

And yet people do fear. Suppose that Smith's best understanding is that he can make 30% profit a month from now on a $1,000 investment. The question is, how confident is he about this estimate? The more (less) subjectively confident he is, the less (more) subjective fear and worry he will feel. Smith knows that his fear is a liability. He would like to be rid of it, but he cannot help it. He is genuinely afraid of the future. He worries about his investment. Could something terrible happen all of a sudden? *Now* the question becomes: How much is being relieved of fear and worry worth to Smith?

Suppose that he would be just content if someone, call him Robinson, gave him a sure $200 a month from now on the condition that Smith surrenders to Robinson all the profits on his investment above $200, if any. Smith has to weigh on his value scales: fear and worry yet $300 vs. complete certainty and peace of mind yet only $200. Smith's confidence rate about this investment is less than 100% and less than Robinson's confidence. (A more realistic futures contract between them would provide for Smith to deliver a commodity of agreed upon quality and quantity to Robinson.) One's confidence is in oneself and one's powers to see the project through. Since different projects take different abilities, one's confidence about them can differ. But confidence is not about the particular uncertainties, since all the "unknown" and the "unforeseen" are always the same grayish monsters under the bed.

There is a clear sense here in which Smith relinquishes his entrepreneurial functions to Robinson, becoming essentially his employee. We have seen that capitalists allow workers to consume immediately; now we add that entrepreneurs allow workers to get paid without taking any risks. It is therefore workers not businessmen who are the coddled class. Thus, Frank Knight (1921) discusses how "the confident and venturesome 'assume the risk' or 'insure' the doubtful and timid by guaranteeing to the latter a specified income in return for an assignment of the actual results" (269-70). The futures market is in a sense a series of heroic quests in which the bold rescue the shy.

Higher confidence rates lower one's inclination to hoard. By discounting expected profits by less, one's opportunity cost of hoarding (in terms of money not made via uncertain investments) is higher.

If one's confidence is zero, then one *is* cowering under the bed. Investing then makes no sense (because something unexpected *will* arise), and one will hoard instead. One may not even consume beyond

the minimum necessary to preserve life because overpowering fear ruins all pleasures.

Sound money, specifically the gold standard, is a stabilizing influence that frees people from undue fear, anxiety, and worry about losing their savings to inflation and busts. With greater confidence, they become more creative and entrepreneurial. At the same time the pace of life becomes more measured, and there is less hustle and wild speculation and more prudent long-term investment, both less fear / cowardice and less recklessness / foolhardiness, which brings individuals and society as a whole toward the golden mean of courage. If anything, this steadies the "animal spirits" which should alleviate Keynes' concerns. For example, the culture of mass investing is a grotesque reaction of the people to business cycles and inflation. Millions of people who should be mere workers get accounts at online brokerages and buy stocks in hopes of (1) taking advantage of booms and (2) protecting their savings from rising prices. Remove both, and investing (as opposed to lending) will come properly to be the domain of the small percentage of the population who have some entrepreneurial skills. All cardinal virtues are connected, and prudence complements courage. Gold as money encourages prudence, too, planning and investing for the long term, including very long term, including indeed the time beyond one's own life. It vastly enhances economic rationality. Greater concern with a more remote future, i.e., lower time preferences, changes other aspects of people's personalities, making them less aggressive, less prone to cheating, and more cooperative, trusting, and just. International trade and peace, promoted by a single universal sound monetary system, create security of person and property and lessen fear still further. The economy becomes at the same time more stable and more dynamic and progressive. Both yin and yang are strengthened and invigorated, and their offspring is to that extent healthier.

29. That production has a structure

There are three kinds of production structure: physical, valuational, and temporal. The *physical* structure is the entire *material* and *efficient* causes of the final consumer goods. The matter comprises all the individual factors that are used in producing consumer goods including materials, parts, tools, machines, software, real estate, goods-in-process, labor, power of nature, and time. The efficient cause is the technologies used to advance the factors down to more finished goods of lower orders. The entire physical production process for a particular high-order good or the good's "set of destinies" may be pictured as an upside-down tree: say, metal ore is used in N_1 production processes,

their output gets transformed with the help of other factors of production into N_1*N_2 particular objects as they move down the structure of production, those objects in turn are altered further into yet more specific $N_1*N_2*\ldots*N_m$ items; and so on until we obtain a wide variety of consumer goods all of which, however, stood in need of metal ore at some point in their creation.

Physical stages are important because application of labor and machine input (during which the machines (a) depreciate and (b) are unavailable for other tasks) and the expenditure of parts are required in order to advance a good from one stage to the next. There is a cost to changing a good from raw to salable condition. The physical structure of production is *objective* in that it lists each good as a material entity and all the inputs that cooperated in transforming it.

	Inputs	**Outputs**
P_1	$2a + 3b + 4c$	$5m + 6n$
P_2	$7a + 8b$	$9m + 10n + 11o$

Table I.29.1. Joint and composite supply and demand.

Let two methods of production use inputs to manufacture outputs as pictured in Table I.29.1. Following Marshall, we can call the fact that a, b, and c are used in P_1 "joint demand" for those (complementary) factors. That several goods are produced by P_1 will be called "joint supply" of m and n, e.g., beef and leather, chicken meat and eggs, wheat and straw. The fact that a is used in both P_1 and P_2 will be called "composite demand" for (nonspecific) a. Finally, m's being produced by two different techniques justifies its moniker "composite supply."

The *valuational* structure of production concerns the pricing of each capital good and so *final* causation. This price is imputed from the price of the final consumer goods that are made by means of the capital good. Joint and composite supply and demand influence the price of each capital good. The marginal unit of any capital good for a firm, say, Widgets, Inc., is the unit when it is ready to be sold. The firm is not concerned with how that good will mature *after* it is sold. It cares only for its own profits. At the same time these profits in future rounds of production critically depend on the later adventures of the goods of which Widgets, Inc. has seemingly successfully disposed. For the marginal unit with respect to the whole destiny of a capital good is the consumer good when it is at long last exchanged for money. Should that consumer good prove inconsumable (entirely useless or salable only at a loss), the consequences will be felt throughout the entire production structure. The heavens (the values and prices of the higher-up capital goods) will tremble if the earth (the consumers) refuses to accept their handiwork. The valuational structure of production is *subjective*, in that

it depends on how important each useful good is in the production of virtuous goods and ultimately desire satisfaction or pleasure.

The subjective valuational structure is found within each firm or margin; in between firms it is also *intersubjective* because it arises out of competing entrepreneurial profit-seeking plans for capital. There is thus cooperation of the factors of production on any project both within a firm and between firms and competition for factors of production among firms. This competition ensures that successful entrepreneurship remains forever a high art. But what saves the day is that everybody faces the same challenges with respect to our "surprises." One does not have to be a super-entrepreneur in the absolute sense; one just has to be *better than others* at foreseeing the future in order to profit. This is because even if entrepreneur *A* is making a modest profit and entrepreneur *B* is correctly forecasting a great profit, *B* can bid the resources that *A* is using in his own production process away from him and still profit despite their now higher price. At that point, *A*, lacking some complementary factors of production, may no longer be able to continue his business activities to the same extent (and neither in all likelihood will *A*'s suppliers – i.e., certain entrepreneurs in the earlier stages of production – the derived demand for whose products will decline). But it is no skin off *B*'s nose.

Taleb (2010) discusses what he calls Black Swan events – rare yet momentous occurrences that are hard to predict. (The idea is that the proposition "All swans are white" can be invalidated by a single, if rare, sighting of a swan of a different color.) His main examples deal with earth-shattering episodes for individuals like writing a successful book and for society like the 9/11 attack. I suggest that the capture of any business opportunity quicker than the crowd and milking it for all it's got constitutes a mini-Black Swan event. Every human action that does something interesting is a Black Swan. Every disequilibrating maneuver is a deviation from the routine and as such is largely unpredictable and eventful. These incidents are far more frequent than Taleb gives them credit for.

The idea of a capital good is inseparable from the role which a given object plays in the successful completion of an entrepreneur's plan to produce a consumer good. To put it differently, all capital is mind-dependent which means that an object is designated as a "capital good" only if there exists a human being who considers it to be a means to an ultimate end. It follows that what is a capital good used to create consumer good *A* to one person may be a consumer good to another person, a different capital good used to create consumer good *B* to yet another one, and something quite useless to someone else still. Physically the same capital good can be used in different stages of production. For instance, the same manual on car repair may be a

capital good to a mechanic for diagnosing car problems, a consumer good to someone who uses it as a doorstop at his home, a completely different capital good to a recycling business that manufactures something out of old paper, and an entirely uninteresting item to a person who can neither read nor imagine any other use for the manual. Furthermore, what is a capital good today may not be one tomorrow, and alternatively a thing which today is looked over with indifference may tomorrow turn out to be the hottest thing since sliced bread. Humans are both creative and inventive, and objects are repeatedly graced with new subjective essences or Aristotelian final causes. Technology determines which things *can* be capital goods, entrepreneurs decide which things *shall* be such. "Capital good" is not a thing but thing-with-a-purpose. That entrepreneur will come to own a given capital good who is willing to pay for it the highest price.

The example of the trade-off of "resources" used in the production of guns and butter in some introductory textbooks is revealed as rather formulaic. The example succeeds in drawing attention to scarcity of capital goods but ignores these goods' versatility (or specificity). As time goes on, resource *A* that used to participate in the production of both guns and butter may end up being used only for guns; again, resource *B* that was not shared between the two purposes may come to be in demand for both. This duality of scarcity and versatility is what imbues the business cycle with the property of taking its time to work itself out: boom, followed by bust, then recovery.

Both less and more specific goods can be used in both early and late stages of production. But as regards the part-whole relation, the parts are less specific than the whole. Metal ore is much less specific than a metal bolt, and a metal bolt is less specific than a tool in which the bolt is used. If it so happened that a better or cheaper tool could be manufactured without the use of the bolt, then the bolt will cease to be useful for this particular purpose, but given its partial nonspecificity, it can be salvaged by the entrepreneurs producing other things, though its price will likely fall along with its quantity demanded. During a recession, specific factors of production suffer the most. If a factor of production can at present be used only in certain particular projects, and these projects turn out to be unprofitable and are slated for bankruptcy and liquidation, then there will be temporarily no use for these specific factors of production – various kinds of labor skills, capital, and land. Their prices will plummet, and only after a while will they somehow be reallocated.

The valuational capital structure is something we have inherited from the past. It is a conservative element, winnowing out many innovations that could take place if we had the opportunity to recreate the whole production structure anew at a moment's notice. But

entrepreneurs have to calculate on a case-by-case basis whether abandoning existing capital goods is justified by the extra productivity of brand-new factories and technologies. Therefore, what is economically efficient is often different from what is technologically efficient with a bias toward the former: at every moment there exist numerous brilliant scientific discoveries and technologies that cannot yet be mass-produced without a social loss. In other words, technology stopped being a limiting factor long ago, and now there is more tech available at any time than we can profitably use.

It is precisely the valuational structure that a central planner under socialism cannot reproduce. Now knowledge is about physical causes and effects, while prudence is concerned with profitable actions. A socialist central planner may know that there are a number of different production processes that he can authorize to bring drinking water to the inhabitants of a certain area. When he consults with his advisors, they give him all the information on the various ways of setting up the production of drinking water. The planner knows all the scientific causes of clean fresh water and all the technologies of producing it, such as from salt water, from the neighboring lakes, from ground water, by importing it from other regions, and many other possibilities. But without the market for capital goods and money prices, the planner cannot know which of these methods is the most economic, i.e., which method will yield the most benefits at the least cost, or equivalently, which is the most profitable course of action. He is faced with the impossible task of deciding between alternative ways of producing the water, including whether he should produce it at all, without any idea precisely which combination of means to attain this end is superior to all other possible combinations, i.e., which combination will *not* cause the more urgent wants of the consumers to be unsatisfied.

Under socialism, (1) for any new project to be undertaken, the planner cannot know what combination of inputs is best for producing the output; and (2) for any nonspecific resource, the planner cannot know in which projects under consideration this resource ought to be used, and for each specific resource, he cannot know to what extent it ought to be used.[18] The planner may thus be said to have knowledge but lack prudence. Socialism is a wet dream of a Keirseyan Rational who pretends to exercise divine-like providence over the economy. The dream turns into a nightmare as he watches everything fall apart around him.

We saw in (I, 11) that the problem of continuously reallocating resources in response to new data such as new products or new technologies so as to improve consumer welfare and leave no resource unemployed is computationally intractable under socialism even under

the best conditions. And these conditions are hardly best. For example, Mises (1996) points out: “Each case offers special conditions and requires an individual solution appropriate to these data. The number of elements with which the director’s decision has to deal is much greater than would be indicated by a merely technological description of the available producers’ goods in terms of physics and chemistry.” (699) The socialist economy may be likened to a vast monopolistic firm that stretches over an entire nation and has hundreds of millions of people as employees. It is obvious that a company like that is simply ungovernable. The dictator-as-CEO has to be aware of a far greater number of realities and possibilities than a single man can process in his own mind.

Further, if the entire world is socialized under a single government, then Smith the planner, residing, say, in some capital city in Mongolia, can scarcely discover what I, living in the U.S., would be most willing to pay for. Numerous businesses are local, started in order to serve local customers, though companies that ship worldwide have become more common thanks to the internet. Preferences therefore are often discovered by area businesses. It would be a formidable problem for Smith to find out my most urgent desires.

Further, in competing with other entrepreneurs, every businessman is offered a rigorous incentive to excel. He puts his own time and money on the line. He must do his utmost to win. Smith on the contrary would need to be “public-spirited” in order to push himself to get anything done. We all, however, know that the search for private profit is far more motivating than some vague desire to improve the world. In other words, Smith is interested in his own profit, and so is an individual entrepreneur under capitalism. Smith, also like an entrepreneur, is *dis*interested in the common good of the whole society. Mises (1996) provides a cogent reality check: “The real Fuhrer, however, turns out to be a mortal man who first of all aims at the perpetuation of his own supremacy and that of his kin, his friends, and his party. As far as he may resort to unpopular measures, he does so for the sake of these objectives. He does not invest and accumulate capital. He constructs fortresses and equips armies.” (850) However, the capitalist entrepreneur is embedded into the free market as a whole which *is* quite intent on (or “interested” in) fulfilling its utilitarian duty.

Finally, even if only Smith is allowed to act, the economy will change every day through causes other than Smith’s actions. Smith cannot just “control” the world (as cartoon supervillains aspire to). It will experience what economists call “shocks” which will range from a tornado to exhaustion of a coal mine to a demographic shift. The equations that are valid this hour may well be useless the next. The market, on the other hand, succeeds in real time.

Therefore, saying, as some people used to do, that socialism "sounds good in theory" but "won't work in practice" because of "human nature," whatever that means, is premature. Socialism sounds awful in theory, too.

The *temporal* structure of production is essentially the Hayekian triangles to be considered in the next chapter and is crucial for understanding business cycles. Now it seems that there is a separate and unique structure of production for every consumer good or service. By what right do we agglomerate all of these into something called "the" structure of production?

The answer is that we are concerned not so much with the physical structure itself but with the fact (1) that advancing capital goods of higher orders into capital goods of lower orders and finally into consumer goods *takes time* and (2) that *time costs money* or interest paid by the demanders of present money to the suppliers of present money. Thus, if interest is paid once a year and a certain production process takes 5 years, then we can consider that process' temporal structure to have 5 layers, each layer representing payments to the higher-order capitalists and being shorter than the previous one as we move up toward earlier stages because of payments to factors and interest. Of course, a capitalist does not receive interest until he has sold his goods, and some production stages within various firms are longer than others. The real particular structure of any process involves numerous transformations of intermediate goods each taking various amounts of time. These points are disregarded, and we obtain a *general* temporal production structure reflecting the timing of interest payments and summarizing the payments to other factors in between.

Keynes is oblivious to the production structure altogether. In an amazing passage, he writes:

> For if producers of investment-goods are making a profit, there will be a tendency for them to endeavor to increase their output, i.e., to increase investment which will, therefore tend… to raise the prices of consumable goods; and vice versa. If, on the other hand, producers of consumable goods are making a profit, but those of investment-goods are making a loss, then there will be a tendency for output to be changed over from the latter to the former, which will… lower the price-level of consumable goods and obliterate the profits of the producers of such goods. (*TM*: Vol 1, 181)

Here, in the first place, Keynes treats "investment-goods" as an undifferentiated blob. This obscures reality. There are three effects of an increase in savings on the production structure: lower consumer demand, higher investment demand, and lower interest rate. Since

capital goods are demanded for the sake of making consumer goods, the derived demand for some capital goods drops along with the consumer demand. The *derived demand effect* is stronger in the *late* stages of the production structure. Lower demand derived from lower consumer demand lowers the values of capital goods in all stages but lowers them by a greater absolute amount in the late stages than in the early stages simply because late-stage goods-in-process cost more than early-stage goods. Meanwhile, the net savings become part of gross investment and are used to bid on nonspecific capital goods. These goods are reallocated toward earlier stages including stages that do not yet exist. Overall, the production structure lengthens. That's the *interest rate effect*. The capital goods in existing late stages drop in price, the capital goods moved to early stages become more expensive than before because the higher investment demand bids up their prices by more than the lower consumer demand drives them down. The interest rate effect therefore is most pronounced in the *early* stages of production.

Keynes might as well have said that if making widgets is unprofitable and making trinkets is profitable, then entrepreneurs will switch from producing widgets to producing trinkets. But the relationship between consumer and capital goods is more complex than that. For example, regarding derived demand, if widgets represent consumer goods and trinkets, capital goods, then it may well be that replacing *existing* widgets of kind W_1 is unprofitable if production of *novel* widgets W_2 that do not yet exist is on the contrary expected to be profitable. Therefore, the production of the *trinkets* that enter into the making of W_2s is also more profitable than before because the demand for them has shifted through the actions of capitalist savers from the factors employed in the old production processes aiming at churning out W_1 to new ones outputting the consumer goods that are yet to be consummated and delivered.

The derived demand effect and interest rate effect are also felt by durable capital goods in every stage of production. Keynes continues: "The lower rate of interest will stimulate the production of capital goods by raising their prices." (263) The price of a capital good in an ERE is its discounted value product over the good's lifetime. If interest rates fall, then the discount factor is lowered, and this indeed puts an *upward* pressure on the good's price. But the cause of the lower interest rate is an increase in savings and the concomitant decrease in consumption. As a result, the derived demand for capital goods declines, lowering their DMVP, thus putting a *downward* pressure on the goods' prices. It is not correct to say simply that with greater saving production of consumer goods will be depressed and of capital goods will be stimulated. Rather the production of capital goods in the late stages of production will be depressed because of reduced consumer demand and despite the lower

interest rate, and the production of capital goods in the early stages will be stimulated because of the lower interest rate and despite reduced consumer demand. The (a) interest rate effect and the (b) derived demand effect act in opposite directions relative to each other, but in the early stages of the production structure the former dominates, while in the late stages the latter dominates.

30. That each investment is highly particular

Capital is a heterogeneous, nonpermanent (as per its nature of intermediate goods that depreciate in the process of transformation, needing at various intervals to be replenished), flexible, complex, interlocking structure of goods of various scarcity and specificity within the market process. The interlocking is both horizontal, emphasizing the complementarity of the factors, the physical structure of production, and technological recipes, such as "7*A*, 2*B*, and 12*C*, when combined, will yield 3 units of output *P* and 5 units of *Q*"; and vertical, emphasizing the orders of the goods and their progression from unfinished to finished goods (the "order" of a capital good reflects its remoteness in comparison to the final consumer good of the first order.) The Keynesian understanding of capital as a "blob" is similar to Ernst Haeckel's view of the living cell as a "homogeneous globule of plasm" in the early 20th century. Just as cell biology has progressed tremendously, so economics has *regressed* under Keynesian guidance into a primitive form. Focusing on the aggregates of "consumption" and "investment" is unhelpful by reason of ignoring the main problem of capital, indeed of production as such.

Investment is an attempt to provide for specific future consumption. It involves purchasing particular capital goods within the structure in a particular stage of production. One investment can come at the expense of another investment and not merely of consumption. In the free market there is no such thing as "total capital," indeed people compete as to who can first identify, take ownership of, and exploit new means to assist other people in realizing their various ends – for a price, of course. Capital goods are (1) well suited for (2) particular production processes deployed to create (3) specific consumer goods which will satisfy (4) some definite desires in the consumers. There is no such thing as "world resources": a physical object can be a resource only relative to a particular entrepreneur and his valuations and plans. Nor can capital be measured, still less designated by a variable like "*K*." Capital is fully heterogeneous as regards all three of its material, efficient, and final causes.

Given an unnecessary but sufficient method of production, each

capital good used in it is an insufficient but necessary cause of the consumer good, hence capital is an INUS physical cause of final output. Each good will be to some extent specific. Of course, there is no such thing as "degree of specificity"; specificity is not a number but a set of the good's potential uses in the economy. Each capital good's both *actual* extent and manner of employment and *potential* extents and manners of employment will be changing all the time according to entrepreneurial discoveries and calculations.

Then there is the valuational structure of production. It has two aspects. The first aspect is exceedingly simple and consists in the fact that as goods are transformed and passed down to the lower-order entrepreneurs and to the consumers, value is added to those goods. Now if by "value" it is meant "subjective utility," then seemingly no value is added because the marginal unit is the finished consumer good, i.e., capital goods are *sub*marginal. However, by using the distinction between useful, virtuous, and pleasant goods, it becomes possible to say that as the good is being transformed it becomes increasingly more *useful*, though it becomes *virtuous* only when production is finished and the good is placed in the inventory of a first-order capitalist, and moreover it becomes a source of *pleasure* when actually sold to the consumer.

All things being equal, a nonspecific good is less vulnerable to change with respect to its price than a specific good since the former can be sold and reallocated. But even a specific good can be fairly invulnerable if it is used in the production of a nonspecific good. Thus, the value of a machine that can only be used in the extraction of metal ore and nowhere else can be secure if the demand for metal is stable or increasing. To the extent that the less specific "parts" belong to higher orders, and more specific "wholes" to lower orders, lower-order goods tend to be more vulnerable. So if by "value" it is meant "price," then on the one hand, if the entrepreneur realizes that he has erred, and the use of his newly produced widget in his own project is a losing proposition, then the more vulnerable the widget, the harder it will be to get rid of it. This puts a downward pressure on the prices of useful goods. For example, if the production of almost-finished consumer goods were for some reason shut down (e.g., by the government for nonpayment of taxes or because a competitor has come up with something vastly superior), then the businessman may have better luck disassembling the goods and selling them for parts. On the other hand, a lower-order good requires fewer complementary factors in order to bear fruit in the form of a consumer good. It is less deficient, more perfect than the goods that were used to make it. This state of affairs puts an upward pressure on the widget's price if it were to be sold. Of course, if plans change, then the widget's order may well change: it may be moved up or down the

production structure by its new owner. Its price and quantity will also be affected.

The second aspect of the valuational structure concerns pricing of the factors. On the one hand, each higher-order good can enter into the production of many lower-order goods. Thus, lumber might be used to produce good *X* and good *Y*, and one unit of good *Z* uses 4*X*, 10*Y*, other factors, and some more lumber. Here lumber is part of the material cause of *Z* both directly and indirectly through *X* and *Y*. On the other hand, the production of each lower-order good uses many higher-order goods. E.g., 20 different factors might cooperate in producing *Z*. There is multiplication of output as we go down the production structure and multiplication of inputs as we go up that same structure. The dependencies can be quite complex, contain loops, and so forth: for example, an axe can be used to chop down trees that will yield lumber, and lumber can in its own turn be used to produce replacement axes.[19] The prices of capital goods are determined by the interplay of these two "graphs," namely, the graph of what lower-order goods a particular capital good is used to produce and the graph of what higher-order goods are used to produce that capital good, together with consumer demand and entrepreneur supply and demand.

The structure of production, as well as the changes it undergoes every day, illustrates the fact that capital goods are convertible, and their subjective essences are very fluid. Price formation of factors of production depends on these factors' opportunity costs, and these costs are most preeminent for nonspecific goods which can be used in multiple projects with multiple aims. Schumpeter considered it the essence of economic progress that entrepreneurs find novel uses for old things. And I agree with Hayek that the fact that production has a structure is instrumental in explaining business cycles.

The slump part of the business cycle lasts for a while because new uses must be found for capital made unemployed by the bust which is a time-consuming process. If goods were perfectly *inconvertible*, then there could be no booms. A good would either be used for some unique purpose or be completely idle. Since misallocation of a resource is relative to some correct allocation of it, any attempt to bring something into use would be considered economic growth and cause no economic sickness. On the other hand, if all goods were perfectly *convertible*, then vicious booms could occur, but recessions would be much shortened if not eliminated completely. When Taleb (2010) finds himself "obsessed" with the notion that "progress… cannot take place without… redundancy" (318), with the example he gives that aspirin over several decades has been used for several unrelated purposes, he is picking up on this primordial idea.

When savings increase, in simple terms the consumers buy fewer

goods being produced. As a result, there is excess capacity in the later stages of the production structure. The competition there (that is, between companies which operate closest to final consumption) will intensify, and firms will cut production or, if they are marginal, go out of business altogether, releasing their factors of production. If these factors are specific, then they may be rendered altogether (if temporarily) useless because the demand for them has disappeared and they have nowhere to go. If they are relatively nonspecific, then they will be reallocated to the earlier stages of novel and more circuitous endeavors. Greater savings indicate lower time preferences and lower interest rates, with the result that the costs of doing business for every firm engaged in comparatively longer production processes decline, making many of such ventures profitable. Any such reallocation will take time and require (perhaps extensive) testing the market, paying the transaction costs of buying and selling the goods, moving physical capital and labor to new locations, and learning new human capital by laid-off workers. But unless we are dealing with a business cycle any instance of which is marked by *mass* entrepreneurial errors and therefore the need during the bust for *mass* liquidation and reabsorption of numerous capital goods into less unprofitable projects, this is simply the market process in action where the "action" is within the intertemporal capital structure.

In other words, following upon the heels of a drop in interest rates, specific factors in the late stages of production undergo a drop in price, nonspecific factors undergo a drop in quantity (after they are reallocated). The former seems to be pure waste. However, the influence of lower interest rates permeates the entire economy and affects factors of all specificities. Occasional excess capacity and rusting machinery, being more generally consequences of disequilibrating entrepreneurship, can be signs of economic progress. Losses here and therefore temporary un- and underemployment of factors affected by such losses are engendered by profits elsewhere. Creative destruction is no joke, and there is little creative advance without its concomitant destructive part.

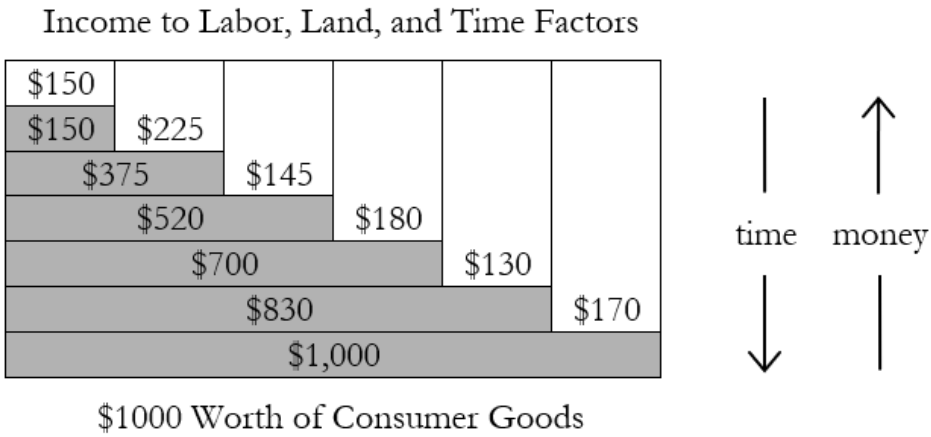

Figure I.30.1. The shaded areas are income to capitalists for produced factors or final goods; the white areas are income to original factors, including wages, rents, and interest.

The Rothbardian triangle, also called the Hayekian inverted input function, shown in Figure I.30.1, assumes for the sake of simplicity that (1) all capital is working or circulating and (2) an evenly rotating economy. Income to produced factors is ultimately resolved into income to original factors.

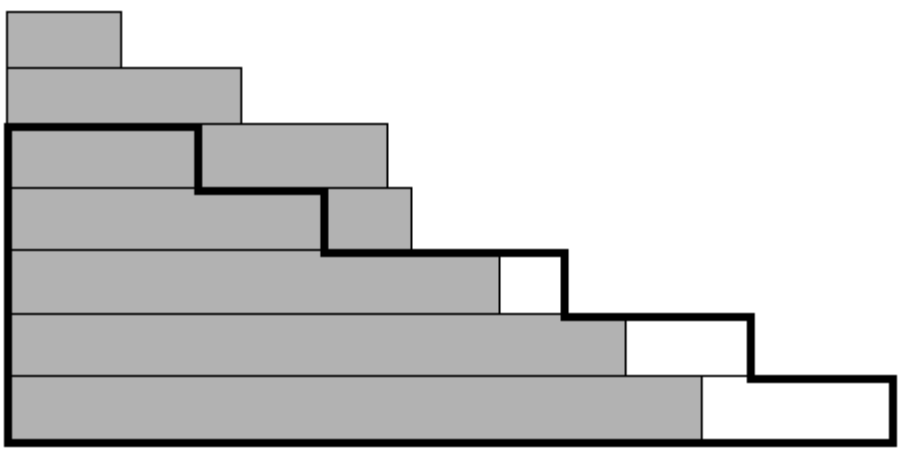

Figure I.30.2. A result of positive net savings: moving from the white with bold outline structure *A* to the shaded one *B*.[20]

In the triangle shown in Figure I.30.2 an increase in savings is manifested by the morphing of the structure of production from shape *A* (bold) to shape *B* (shaded). Its foundation – which stands for consumption – shrinks, say, from $1,000 to $800, but gross investment increases.

Without taking cognizance of the structure of production and the

different influences of derived demand and interest rates on the different stages of that structure, it becomes possible to argue confusedly that saving, by lowering the rate of interest, makes investment more attractive, while at the same time, by reducing the sales expectations of entrepreneurs, it makes investment less attractive. It thus reduces both "cost" and "demand." Little sense can be made of this sort of proposition unless it is added that lower demand hurts the producers operating in the late stages more than lower cost benefits them; the opposite is true for projects that take a long time to complete.

An increase in savings does not entail that there are too many consumer goods – there can never be too many consumer goods – but that there are too few future goods as compared to present goods from the point of view of the time preferences and interest rates of the moment.

Paul Davidson (2009) paints a simple Keynesian picture. A penny saved is a penny not earned, he argues. A decline in spending, for example, lowers the amount of money received by business firms. As a result, they take losses, curtail production, and fire (or refrain from hiring) employees. And so we enter a recession. Davidson thus confuses saving as hoarding with saving as investing. (Even hoarding is unproblematic since it will only occur in severe depressions and can in any case shorten the depression.) Davidson objects that no one ought to believe that "if people are saving more and buying less from business firms, business firms, in the face of this decline in market demand, immediately invest more in additional capacity to enable them to produce more product," especially "when they already have capacity that has been idled by this decline in sales and orders" (56). Well, they will certainly not invest any more money in producing *more of the same things*! But they will liquidate their present capacity and cut the budgets for existing production processes for which they experience weaker demand and use the greater available savings to invest into *something else*, something new, some project that perhaps could not up till then be undertaken because of relatively high consumer time preferences but which is now no longer uneconomic. The very act of saving for the sake of investing reroutes the efforts of entrepreneurs into producing brand-new capital goods. The time it takes to build those goods adds to the length of new projects that utilize them, making the overall temporal structure longer.

As Mises (1996) argued, "no technological improvement would have been possible if the additional capital goods required for the practical utilization of new inventions had not previously been made available by saving" (609). The long-run trend of increasingly lower interest rates helps to bring into economic use those technologies whose implementation takes an especially long time.

If Davidson had ever identified credit expansion as the main cause of an investment boom, then he would have realized that given tons of artificially cheap credit, companies *do* invest into crazy projects. They act similarly, though without mass errors, if credit is *naturally* enlarged by means of private voluntary savings, as well. Mises (1996) is quite explicit in saying that in the market economy "a tendency to overrate rather than to underestimate the potentialities of an innovation prevails. The history of modern capitalism shows innumerable instances of abortive attempts to push innovations which proved futile. Many promoters have paid heavily for unfounded optimism. It would be more realistic to blame capitalism for its propensity to overvalue useless innovations than for its alleged suppression of useful innovations." (512) This result is unsurprising given that courage is the defining virtue of entrepreneurs who do sometimes overestimate their powers. But a newly available longer and hopefully more fruitful production method is indeed an innovation.

Davidson further proposes a complex scheme to "reform" the international monetary system. (134ff) (God forbid people are allowed just to trade with each other as they see fit.) His idea is that nations with trade surplus or "creditor" nations must be forced to spend the money in their possession rather than sit on it. Davidson even goes so far as to suggest that nations whose surplus is judged by his International Monetary Clearing Union to be "excessive" will have their cash holdings confiscated. One way to avoid this would be to "provide foreign aid to deficit IMCU members." So then, various individuals and companies within country *A* have sold more stuff to individuals and companies within country *B* than they bought from them, receiving, let us imagine, monetary profits. The government of *A* then taxes those profits away and gives the money back to the people of *B*. The global economy is thereby stimulated. This is sick. Keynesians just do not understand saving.

31. That longer processes are more productive

The term "roundabout" as applied to production processes can mean several things. It can mean "capital-intensiveness" or the sheer number of kinds of capital goods in use, "requiring more capital and intermediate steps to make a final good." It can mean "time-intensiveness" or the length of the project. And it can mean a kind of "complexity" of the production structure, the sophistication, admittedly hard to measure precisely but still easy to gauge, of this technological unity-in-variety that defines industry.

For our purposes we'll use the second meaning of

roundaboutness, “requiring more time” which refers to the temporal structure of production. Böhm-Bawerk noticed that productivity can be increased by the adoption of more time-consuming production techniques. Adds Mises (1996): “As acting man prefers those processes which, other things being equal, produce the products in the shortest time, only such processes are left for further action which consume more time. People embark upon these more time-consuming processes because they value the increment in satisfaction expected more highly than the disadvantage of waiting longer for their fruits.” (481) It is time that costs money along with labor and land, the actual number of intermediate steps is next to irrelevant in this approach. If it takes 10 months to carry good *G* through 10 transformations down to the final consumer good, and it takes 1 month similarly to carry good *H* through 100 transformations, then the process involving *G* is more roundabout than the process involving *H*. “Roundabout” may be synonymous with “circuitous,” but here we will take it to mean “more time-consuming.” The period of production and the capital-intensiveness of production are not linked in any predictable way. The time it takes to build a capital good, the time during which it remains serviceable, and the time it saves in the production of other goods are all separate variables.

Some short processes are very costly in terms of other factors. Suppose that Crusoe uses fishing rods to catch fish and replaces his rod once it wears out, a process which takes him 1 day. At one point, luckily, Crusoe learns that there is a cache of fishing rods on a steep hill such that to go there, grab one, and come back takes 1 hour. Unfortunately, climbing the hill is too much for Crusoe who feels he might get a heart attack in an attempt. We see that not all shorter processes are in use. Still, we try to economize on time.

There are ways of lowering costs other than of time. It is often possible to initiate a more productive and at the same time shorter process with the help of a new technology. It can be the same process yet with lower costs of, say, labor (e.g., Crusoe gets healthier due to all the manual work he had to do or more experienced and capable of churning out more goods each workday). It will then be more productive yet take the same amount of time. In cutting costs, one can also rely on less labor or less land or fewer capital goods. Finding an equally good shorter process will mean *disinvestment* with the same revenues and therefore greater profit. The problem arises if no way of profitably disinvesting can be found. Then only longer processes remain to be considered. There are likewise other ways of boosting productivity. E.g., an economy can become more productive by means of a more sophisticated division of labor. This can intensify with increased population, incorporation of faraway lands into global social cooperation, increased freedom of trade and of movement of capital and

labor through political boundaries, better protection of private property rights of foreign investors from confiscation, and peace. Keynes calls these ways of improving productivity, reasonably, changes in "institutions."

The puzzle can be phrased as follows. Time is just one of the traditional original factors of production. Why not say that if a particular process has expensive labor, then it will be undertaken only if it is sufficiently productive to offset the extra costs? What is so special about time? Why do we not say: "more labor-costly processes tend to be more productive"? Or: "methods which enhance the regenerative power of nature tend to be more productive"? Or even: "Better tools make work more efficient"?

Suppose that process *A* takes 1 week to produce its consumer goods. Process *B* is just like *A* but is preceded by a 3-week diversion of digging ditches and filling them back up. Surely, *B* is less productive than *A* and yet it is longer. What is going on? Consider the following propositions about this problem.

1. Longer projects have to be more productive than some shorter processes in use, or else they will not even be considered.
2. Still more, longer projects have to be *quite a bit* more productive if they are to be selected and implemented.
3. Both kinds of processes actually exist.

The claim we will defend is that both (1) more productive processes tend to take longer, and (2) longer processes that have elicited the interest of an entrepreneur are expected to be more productive.

(1) Take a random more productive process, why should it be longer? The objective link between productivity and roundaboutness is that more productive machines tend to be more complex from the engineering standpoint, and more complex things take longer to build. (God may be simple in the Thomistic sense, but the perfection of human art is found in complex things.)

A newly invented technology can of course be shorter or longer than what's currently being used in industry. There is an incentive to utilize all the feasible shorter processes first, other things being equal: this way, the waiting time will be as low as possible. I add the caveat because there can always be a short process that, for example, is hugely expensive in terms of the original factors other than time such as labor (e.g., Crusoe climbing the hill or employing a genius at menial jobs) and for that reason is eliminated from consideration despite its shortness. So after a while, the superior tech that's *not* yet being employed will tend to take longer. It is just sitting there waiting. It is these methods that will come into use if interest rates decline. Men want to get results as soon as possible because disutility of waiting is always troubling them,

so it is likely that most of the shorter processes have been perfected, and any increase in business efficiency must therefore require more of such time-consuming projects. At some point the entrepreneur will throw his hands in the air and say that he has done all he could with the time he was given and that he just needs more time (and more factors complementary to it).

(2) Take a random longer process, why should it be more productive? Greater productivity can mean three things. Longer processes can be (a) more *physically* productive, that is, increasing the quantity supplied more than proportionately to the increase of the time input. Crusoe catches 1 fish per day with a rod which takes him 1 day to make but would catch 8 fish per day with a net which would take him 1 week to make. In one sense the second technique is shorter than the first because, assuming Crusoe works 8 hours per day, it yields 1 fish per hour as opposed to per day. But in another sense it is longer insofar as it takes longer to *set up*, to build all the capital goods necessary to commence production, in this case 1 week as opposed to 1 day. During this week, no fish are being caught at all. The new capital and consumer goods can be (b) of *completely new kinds* that were at all impossible to produce in shorter amounts of time. In this case the technique will be longer but the shortest possible means to a particular goal. Finally, no entrepreneur will bother investing time unless profits due to higher productivity of labor outweigh the extra sacrifice of present utility. This means that new and longer processes ought to be expected to yield (c) *more value* than old and less time-intensive techniques.

It is true that digging and refilling ditches will make a process longer, but that is why longer processes merely *tend* to be more productive: the human desire not to waste production time is assumed. (Indeed, it is just as possible to waste labor or capital and not just time.) Keynes objects that "lengthy processes are not physically efficient because they are long" (*GT*: 214). True, but longer processes are more resource-intensive and more expensive to set up; their opportunity cost is shorter processes that allow one to consume more here and now. Hence, they *had better be* more productive. And the same thing can be said about the other original factors: a process requiring more labor or land is more expensive, hence, analogously, if an entrepreneur chooses it anyway, then it is expected to be more physically productive, as well.

Keynes argues further that "smelly processes command a higher reward, because people will not undertake them otherwise. So do risky processes. But we do not devise a productivity theory of smelly or risky processes as such." (*GT*: 215) But there is no reason to believe that there even exist smellier processes that are more productive at all. Smelliness by itself is completely useless in aiding productivity, it's not a factor of production. But time, at least when used efficiently, is very useful, just

as labor or land. It's an empirical fact that longer technological methods of production result in higher yields. The higher productivity of increasingly more roundabout processes explains why people continue to invest into such processes. To do so they have to lower their time preferences. It is *possible* to get richer by extending one's time horizons, and many do. The absence of any objective link between smelliness and productivity explains why people totally ignore smellier processes unless by some bizarre accident they indeed happen to be more productive.

Though time is a factor of production (in the sense that investing more of it can yield greater fruits) and is scarce (in the sense that people want to economize on it), interest is not paid for the "productivity of waiting." The problem can be put this way: let a technological formula be $P = 2X + 3Y + 5Z + 12W$, where W is a time period such as a month. Why wouldn't W have its own marginal product? For example, let P be software, and one is considering delaying its release for an extra month to fix bugs. A better app can be sold at a higher price or, such as if it gets good reviews, to more customers. Wouldn't the time invested result in a definite increase in P? In the first place, increasing W also raises all other costs since labor is measured in labor-hours, and if one rents capital and office space, he pays more for those things too. So mere "waiting" doesn't accomplish anything. Even in the case of wine, X is young wine, Y is power of nature to improve wine. Y may not cost anything, it may be a general condition of human welfare. Regardless, time is productive only when "filled" with other factors. Second, it doesn't seem possible to own "time" as the stream or flow of time, if that's what time is. Therefore, one cannot derive exclusive income from such ownership. It might make sense to say that I own "my" time, and you own your time in the sense that we each of us decide how to employ our time. If you're required to pay taxes, the government is stealing not only your labor but your time as well. And if you try to evade the taxes, are caught, and go to jail, you'll lose valuable time while behind bars. But time is pretty unique. You can exchange money for a good, and you can exchange money for labor that improves a good you already own. But exchanging money for time is a different matter altogether. It can only be done on the consumer loan market or between capitalists and workers. The price of time, interest rate, is determined not by its marginal productivity but by time preferences.

Higher productivity of longer methods of production means that those who take advantage of such methods first can earn entrepreneurial profits. But in equilibrium, when all such excess profits are gone, these businessmen will only earn interest income. Interest is then independent of all considerations of productivity.

To conclude: the more resources including time firms within an economy profitably utilize, the more ideal or efficient the economy

becomes. In a primitive economy man looks upon the bounty of nature with stupefaction: he must leave most of nature in pristine condition. But as population grows and capital accumulation continues unabated, a greater and greater share of the previously useless or inaccessible external environment comes under human control and within the purview of the entrepreneurs. (By right man neither leaves nature alone nor destroys it but subjugates it.) Even though it is always best to complete any project with the help of as few resources as possible including *as soon* as possible, at some point all such projects will be exhausted, and all novel undertakings will involve more factors and take longer to complete. In other words, *there is never such a thing as full employment of time*.

32. That wage and price deflation is a human right

Capitalist saving allows an entrepreneur during a period from t_1 to t_2 to buy factors of production. Consumer spending allows an entrepreneur at t_3 to sell the finished product at a profit. There is no *first* round of production without saving, and there are unlikely going to be *further* rounds of production unless what is produced in the first is successfully sold to the consumers. Thus, saving and spending are two sides of the same coin. As we will see, Keynesians base their entire political program on these seemingly innocuous facts. They argue that capitalist saving can be boosted by the central bank's credit expansion, and consumer spending by the government's borrowing and spending. In other words, the monetary policy can be used to lower *costs* of doing business, and the fiscal policy can be used to increase business *revenues* and boost entrepreneurial expectations or confidence or animal spirits. Once started, the quasi-boom can continue forever. However, we will also see that the saving of money must be complemented by the contemporaneous creation of new capital goods, and that consumption must be the exclusive privilege of the people rather than the state neither of which happens under the Keynesian policy mix.

A higher rate of savings is produced by lower time preferences. These fall slowly as people learn to control nature better: the human race as a whole becomes more prudent, sort of more socially virtuous, and able and willing to provide for increasingly more remote future which accelerates growth by making an additional number of lengthy techniques economically viable. The most significant "metaphysical" obstacle to economic growth is precisely the scarcity of time.

It follows from the consideration of the Hayekian / Rothbardian triangles in (I, 30) that higher investment in money terms is coupled with lower consumption. Income to factors which comes from consumer

spending therefore declines, i.e., nominal wages fall, but so do incomes to individual entrepreneurs operating in the consumer or low-order capital goods industries. This means that prices of consumer goods will fall as well. These two factors cancel each other out; it would seem that we have in essence a purely monetary phenomenon of general price deflation. However, (1) we have seen that longer processes are normally more physically productive. Even if nominal wages fall, given constant or slowly increasing money supply (obtained, say, by mining gold), there will be eventually a greater abundance of goods at lower prices than would prevail had there been less saving. This will *more than* compensate for lower wage rates. Further, (2) since labor, say, is applied in production through time, a fall in time preferences and the corresponding diminution of the interest rate in every temporal stage will lower the discount rate for the factors, raising their DMVP and therefore their income. Workers benefit at the expense of capitalists. The two factors assure that prices fall *faster* than nominal wages, therefore real wages rise. (See Rothbard 2004: 525-7.) The same conclusion can be drawn by studying the equation of exchange, $MV = PQ$. If Q increases, other things being equal, then P decreases. But a higher Q implies greater prosperity and therefore higher real wages w/p. So, though both wages w and prices p fall in money terms, wages fall by less than prices.

This deflation is a virtuous process, though it does enjoin upon any entrepreneur who is contemplating his business plan to take into account not only an increase in the productivity of his own enterprise but also the possible improved efficiency of everyone else in the economy. However, that he must do so is analytic, as in contained in the meaning of the phrase “entrepreneurial competition” and the fact that production takes time. If the overall supply of consumer goods increases with time, then more of other goods will have to be sacrificed by any consumer to purchase anyone’s goods; buying from him will have a higher opportunity cost, lowering his prices and therefore his profits. Thus, wage and price deflation is an essential phenomenon of economic progress.

There is no “paradox of thrift” in which increased savings lower consumption, therefore lower incomes, therefore lower saving, apparently defeating the purpose. This unsavory idea is based on the confusion of saving with hoarding and the untenable assumption of rigid prices. I do not mean that if people buy fewer cars and instead save and invest, then car manufacturers will build more auto factories. The expansion will of course take place not (necessarily) in car production but in those possibly nonexistent goods that take longer to produce and whose production by reason of high interest rates is for now unprofitable. Resources will be reallocated from the production of the

sort of cars we have today toward as yet unavailable goods in the more distant future (and those goods may well include a superior kind of car).

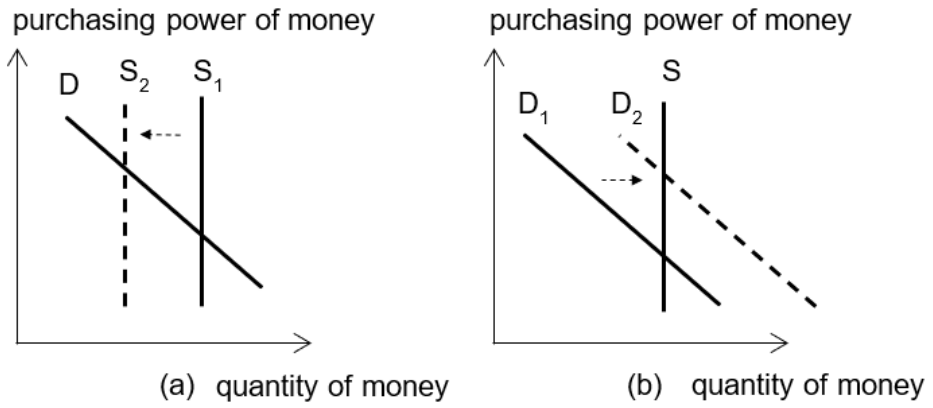

Figure I.32.1. Price deflation due to (a) money supply contraction, (b) increase in the demand for money.

Deflation$_{c1}$ (for cause) or deflation proper is diminution of money supply. It happens, for example, when the Fed sells its securities on the open market or when the reserve requirements for banks are tightened. Deflation$_e$ (for effect) is a general drop in prices due in one case to deflation$_{c1}$, pictured in Figure I.32.1(a). We move from S_1 to S_2 which causes the price of money to go up. But the price of money is the set of all the things that a unit of money can buy or in other words the money's purchasing power. For example, in the equilibrium with S_1, \$1 costs 1/2 of a loaf of bread, 1/1000 of a TV set, etc. In the equilibrium with S_2, \$1 costs more, such as 1 loaf of bread, 1/700 of a TV set, etc. The purchasing power of money cannot in the long run help but go up. But there can also be deflation$_{c2}$ which is an increase in the *demand* for money causing deflation$_e$, seen in Figure I.32.1(b). The move now is from D_1 to D_2, and again it causes the PPM to rise. In thinking about this matter, we must avoid equivocating between these three kinds of deflation, and in calling deflation a human right I refer to the drop in prices due to deflation$_{c2}$ itself caused by greater prosperity (i.e., higher Q in the equation of exchange).

Sometimes the desirability of stable prices is asserted. But stable prices are a chimera. Mises (1996) explains:

> Exchange ratios are subject to perpetual change because the conditions which produce them are perpetually changing. The value that an individual attaches both to money and to various goods and services is the outcome of a moment's choice. Every later instant may generate something new and bring about other considerations and valuations. (217) Stability, the

> establishment of which the program of stabilization aims at, is an empty and contradictory notion. … It is vain to sever valuation and action from man's unsteadiness and the changeability of his conduct and to argue as if there were in the universe eternal values independent of human value judgments and suitable to serve as a yardstick for the appraisal of real action. (219) … rigidity in the monetary unit's purchasing power is unthinkable and unrealizable… (223)

In order to grasp the absurdity of "stable prices," it is enough to imagine any disruption of any evenly rotating economy whatsoever. Such a disruption, be it due to an invention being put into production, a new consumer good being introduced, positive or negative net savings, a new investment, demographic changes, or an increase in the supply of gold, if gold is monetized, will reconfigure the entire price structure of the economy. Economic progress, in fact economic change of any kind is totally inconsistent and incompatible with monetary stability. The prices 50 years ago are of little use in today's economy. How can the perpetually changing set of goods and services on the market in terms of their nature, quality, and quantity maintain the same price? How can the perpetually changing ways of producing those goods and services cost the same? Now there is a difference between changes in relative prices and changes in the absolute price level brought about by changes in the supply of and demand for money. Changes in all three of *M*, *V*, and *Q* affect the absolute price level, but changes in *Q* do so by changing the relative prices. In this last case it is not an extra burden on the market to adjust the absolute price level (as it would be in the case of a purely monetary disturbance). Changes in *M* and *V* contribute their part to "instability." In a progressing economy in the long run we would then normally observe (1) deflation_e caused by deflation_{c2}, and (2) inflation_e caused by inflation_{c1} such as an increase in the supply of precious metals, if they serve as money, by mining them out of the ground. If inflation is mild, it does not impair the ability of money to fulfill its functions.

Digging for gold has often been derided as a socially useless endeavor. But one cannot maintain the evil of *both* any price deflation, however modest and steady, *and* the laissez-faire way of adding to the money supply, namely by mining gold which gently neutralizes this deflation. I understand very well that lowering nominal wages can be bad for employee morale. To which the precious metals mining industry is a natural and safe remedy! It is especially ironic to hear the U.S. *Federal Reserve* talk about price stability when it over the course of its existence has been responsible for a dramatic erosion in the purchasing power of the dollar. Far from somehow "countering" the secular deflation just described, the rate of the Fed-initiated inflation (rising *M*)

has far outstripped whatever rate would have been necessary (by maintaining the absolute price level *P*) merely to "keep up" with the increasing standard of living (rising *Q*).

Price stability, such as it is, under laissez faire is naturally (that is, without government intervention) maintained insofar as prosperity-induced price deflation makes gold mining more profitable, and on the other hand overinvestment in gold production will create inflation and cause this industry to become less attractive. Thus, deflation_{c2} is counteracted by inflation_{c1}, and appropriate long-run price stability efficiently serving the purposes of economic calculation is thereby secured within the free enterprise system. In addition, an increase in the demand for money, if money is gold, will temporarily expand *employment* in the gold mining industry which will absorb whatever workers have been displaced elsewhere due to any short-run price rigidities.

Paul Davidson (1978) objects as follows: "Once economists recognize that rapid movements in money-wages can, in a modern monetary economy, destroy the usefulness of money as a store of value and consequently induce a reversion to barter, the general equilibrium delusion of the unmitigated desirability of freely flexible wages and prices will be apparent." (239) This statement contains so many fallacies that it is hard to know where to begin.

First, under what circumstances do prices change rapidly? My only guesses are (1) in disaster areas, during massive floods, fires, or earthquakes. But in such cases price increases are both very brief and necessary efficiently to (a) ration and (b) encourage delivery from other geographical regions of goods that suddenly become extremely scarce. Prices also change rapidly (2) during hyperinflation, but hyperinflation is not a market phenomenon but rather one of government interference with the market under a state-controlled fiat money regime. Lastly, Davidson may be referring to (3) the bust coming in after a boom swiftly like a thief in the night and resulting in a spate of bankruptcies and job losses in a short amount of time. I cannot imagine how even the need for a severe economic readjustment can destroy the medium of exchange.

Second, if real wages increase and prices decrease as a result of the process described in this chapter, whether rapidly or not, then money's utility as a store of value will only be enhanced.

Third, inflexible wages and prices create shortages and surpluses and unemployment.

Fourth, unless prices are flexible, equilibrating entrepreneurship is impossible. This creates immense economic inefficiencies.

Fifth, prices may be potentially flexible but actually sticky as suggested in (I, 2). Nothing prevents inflexible or rarely changing prices

if that is the best business model.

Finally, wages represent income, and income is different from monetary wealth or a cash balance. Therefore, wages can change relative to each other without affecting the overall purchasing power of people's savings.

It does take a certain chutzpah, arrogance of a fanatic, to support price controls on the grounds that free market prices can fluctuate "too much" and damage people's hoards. Did I say "free market"? Perish the thought! For Davidson, a burger costing $4 today and $4,000,000 tomorrow is a live possibility but only because of his own schemes. Davidson gets a thrill out of the idea of flooding the economy with fiat and credit money, causing money supply inflation. But price inflation puts a damper on his omnipotence. What to do? Why, control prices, of course. (Jones (2008) claims that Keynes "had a horror of the perils of inflation" (175). That certainly is not apparent in Keynes' works. But if he did abhor inflation, then it is only inflation of prices and not of the money supply.) Even on his own terms Davidson makes no sense. For, as we will see, Keynes *hated* the fact that money is an excellent store of value. Destroying that is precisely what Davidson's own master would unequivocally demand.

33. That speculators perform a social function

Chapter 12 of *General Theory* is particularly painful to read, so many fallacies it contains. Keynes distinguishes between three kinds of people participating in the stock market: the masses, the speculators, and the investors. Speculators seek to profit in the short term, and investors seek to profit in the long term. These seem to cover all possibilities. What then are the masses supposed to be doing? Keynes alleges that speculators "gamble" with the market, that they "are concerned, not with what an investment is really worth to a man who buys it 'for keeps,' but with what the market will value it at, under the influence of mass psychology, three months or a year hence" (*GT*: 154-5). In playing against the masses, speculators try to foresee how they will value a stock; in playing against other speculators, they try to foresee how those others will foresee the masses (and presumably the investors) valuing the stock.

Now if the masses' investment strategy is not based in some way on profit expectations, then those people are irrational, and their behavior cannot be predicted. But we have just seen Keynes condemning speculators for outwitting the average dull market player. Perhaps our author means that the masses are both poor speculators and poor investors; the masses have the same *aims* as the professional speculators

and investors, it is just that they are bad at this work, they make mistakes. But then why is Keynes praising "the high brokerage charges and the heavy transfer tax payable to the Exchequer, which attend dealings on the London Stock Exchange" which deter the masses from trading on the stock market? (*GT*: 159-60) This policy is bad for two reasons. First, the whole point of the stock market is to allow (possibly or even usually poor) business newcomers to challenge established firms. Insofar as the charges and taxes permit only the rich to trade, they are the exact opposite of what is needed. How rich a person is and how good an investor and entrepreneur he is are entirely separate questions. Second, Keynes himself admits that there is a process of natural selection going on that causes the masses to lose their money and leave the market, leaving only highly skilled speculators and investors. These artificial barriers to entry are superfluous.

To begin with, changes happen on the margin, and for any given company, only a few stockholders buy and sell every day. The volume of trade is far smaller than the total number of shares in people's accounts. Those who hold shares determine share prices as much as those who buy or sell. This means that the prices of most stocks do not fluctuate wildly. Keynes overrates the power of speculators. Of course, if there is an economic bust with what I will later call "mass losses" and stocks do collapse, then it is due not to normal market activity but to government interventionism that brought about the preceding boom of which the bust was an inescapable consequence.

Second, Keynes faults the speculators for playing against the mob, but it is precisely in this that their social function consists. If the mob is irrational, such that if "everyone" is buying, then they rush to buy too, and if "everyone" is selling, then they are moved like lemmings to sell as well, then speculators check this irrationality and smooth out extreme fluctuations by selling high and buying low. They thereby do not permit the deviation of stock prices to become too great. As such, they inject *rationality* into the stock market by keeping prices within reasonable limits. It's true that they outmaneuver the "lemmings," but so what? Keynes understands quite well that speculators play not only against the masses but also against other speculators: "this battle of wits to anticipate the basis of conventional valuation a few months hence, rather than the prospective yield of an investment over a long term of years…, can be played by professionals amongst themselves" (*GT*: 155), yet makes nothing of it. In fact, overall "speculating" is no more profitable than "investing." There are good and successful speculators and investors, and there are bad speculators and investors whom the market quickly dispatches.

"We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average

opinion to be." (*GT*: 156) Doing this, as Hazlitt (2007: 178) points out, is an excellent recipe for going broke. Whatever grain of truth there is to this lies in the fact that during a stock market boom people invest, at least suspecting that the fix is in, in hopes of beating the market and escaping at just the right time. But the blame for the boom-bust cycle cannot be laid at the feet of the free market.

Skidelsky (2010) writes on p. 73 that Keynes argued in a letter: "Is not the rule [for an investor] to be in the minority? It is the only sphere of life and activity where victory, security, and success are always to the minority and never to the majority. When you find anyone agreeing with you, change your mind." On p. 92, he says that Keynes "thought it reasonable to 'follow the crowd' in the face of uncertainty. He would have seen it as an example of rule-utilitarianism – which is simply the belief that the best results on the whole are to be achieved by following generally accepted practice." Obviously, the two quotations contradict each other. The first quote is *true*, and the second one is *not even false*: rule utilitarianism is an ethical theory demanding that each person act according to those rules that will tend to maximize society's general happiness. But (1) such rules are not "whatever everyone is actually doing right now," the investors (2) are not doing ethics and (3) are maximizing *their own* happiness and not trying to achieve "the best results on the whole." Was Keynes therefore a better entrepreneur than he was an economist?

Third, long-term changes in the prices of equities come about as a result of numerous daily short-term trades. The "short-term" speculating and "long-term" investing morph imperceptibly into one another.

Fourth, there is no such thing as a safe investment. Even the debt of the government itself, even when it is secured by the possibility of inflation, even when it is continuously monetized, is not fully safe. It is true that with the government's access to the printing press, the *default* premium of its bonds is removed, but the premiums of the *general collapse of the fiat money unit* and of *hyperinflation* are added; however, the first effect dominates for as long as the government is thought to be "too big to fail."[21] Mises (1996), for example, did not believe that "the states will eternally drag the burden of these interest payments. It is obvious that sooner or later all these debts will be liquidated in some way or other, but certainly not by payment of interest and principal according to the terms of the contract." (227) In a crisis, things can turn on a dime.

Even investing in something like the S&P 500 mutual fund is hardly safe, for owning this fund serves essentially two things: first, as a bulwark against inflation; and second, as a show of trust to the U.S. government to the effect that its policies are wiser than those of the governments of other nations such that foreigners invest in the U.S. and

not elsewhere, swelling the price in dollars of the U.S. economy. One is investing into a "more profitable government." So far this trust has not been completely misguided. But sooner or later things will be shaken up even there. For any investment, just as for any speculation, there are right and wrong moments to buy and sell.

Consider Taleb (2010) whom I find strange. He presents himself as a "practitioner" of applied science. Hence, he is no academic. But he is scarcely an entrepreneur either, mired as he is in make-believe numbers rather than real insight into some particular business niche. When he was a trader, he did not wake up in the morning and think: "What can I do for the consumers today that is better than what everybody else is doing?" He was a "macro"-businessman who did not build his business in his garage, animated by a desire to serve the public in some highly specific area in which he possessed technical expertise, but thought that he could find companies to invest into based on some number-crunching model. *Black Swan* is an admission of guilt that he cannot do this. Macrobusiness is fraud, even more so than macroeconomics (insofar as the latter is merely an apology for interventionism), permitted by government / central bank manipulation of interest rates. If macrobusiness, aka institutional investing, is construed as sustainable, then it is little more than investment into political systems. If it is taken as a way to exploit business cycles – and the mathematically über-complex "finance" as we understand it today revolves solely around spotting and taking advantage of booms – then it appears to work at first, but since Taleb does not know the (economic) causes of the business cycle nor has a particular (entrepreneurial) insight into how to figure out when the boom will turn into a bust so that shrewd investors can pull out in time to make profits, his book is of limited interest.

Fifth, in both speculating and investing a person is counting on his superior foresight as compared with the foresight of everyone else. An investor thinks that a company's stock is underpriced. People have failed to seize the opportunity to buy the stock that the investor thinks will be very profitable. Now is his chance. But a speculator too thinks that the mob has undervalued a stock. So, he buys it. Again he is foreseeing that the "animal spirits" will drive the stock back up. In both cases the trader's entrepreneurial alertness is tested. The only difference might be that "it takes *more* intelligence to defeat the forces of time and ignorance of the future than to beat the gun" (*GT*: 157).

Sixth, Keynes claims that the objective of speculating is to "pass the bad, or depreciating, half-crown to the other fellow" (*GT*: 155). But this sort of thing happens predictably only during an unsustainable boom. Neither investing nor speculating involves any kind of deception but rather different honest estimations of the profitability of the

companies being traded. It is true that some will be right and some wrong, but what of it? Competition within the market process by its very meaning entails the emergence of both winners and losers.

In the end, there is no such thing as a long-term investment; all investments that involve risk and surprises (and which do not?) are short-term. Those who think they can buy a company's stock and keep it for years enjoying the dividends are usually disappointed. Profits as such are a short-term phenomenon; to stay in business entrepreneurs have to win each day anew, and each day the state of the market and the winning companies will be different. The only feasible long-term investments essentially for interest are in large index funds. Hence if you're conservative, diversify; if you like taking risks, put all your eggs in one basket, but watch the basket very carefully and sell it at just the right moment.

Interestingly, in this chapter Keynes for the first time attacks "liquidity" or liquid assets as economically perverse. He will continue the attack later because of his belief that liquidity, far from being a virtue of assets, is vicious because "liquidity preference" drives up interest rates and reduces consumer spending and hence aggregate demand. These for Keynes are abominations.

Here, however, the condemnation of liquidity as antisocial has a different reason. Liquidity is bad because it masks reality: the *entire* stock of capital goods is not liquid for the *whole society*. Liquidity is an illusion. It should be clear that this argument is bizarre. Is Keynes even against consumption as such because whenever a consumer good is purchased, it does not change, the only thing that happens is that the property right to the good is transferred from the 1st-order capitalist to the good's consumer? It is true that capital goods cannot be physically turned into money like Lot's wife into a pillar of salt. The point of liquidity is to move resources from people who do not know how to use them properly into the possession of better entrepreneurs. The incompetents, being blind to opportunities, will agree to a low price which grants their superior brethren a chance for profits. Keynes acknowledges this opinion: "the proper social purpose [of the stock market] is to direct new investment into the most profitable channels in terms of future yield" but denies it any validity, insofar as "enterprise" is "the bubble on a whirlpool of speculation" (*GT*: 159). If Keynes is describing an unsustainable stock market boom, the complaints he lodges are ironic and solely his own fault because such a boom is entirely the consequence of the policies that he himself advocates.

Keynes writes that Americans rarely invest for income but only in the hope of capital appreciation. But whether it is one or the other depends to a large degree on how profits to the company are allocated by the CEO. They could be distributed to the shareholders for

consumption or ploughed back into the business. (The latter case seems actually to be concerned with the long run more.) Keynes has posed a distinction without a difference. Moreover, (actual) profits enhance either capital gains, present dividends, or both. Hence anyone playing the stock market, investors and speculators alike, will chase after profits thereby fulfilling their social function.

Moreover, the total stock of capital is not the same from one moment to the next; as we have seen, each objective essence can have numerous subjective essences that are in constant flux as entrepreneurs make previously useless goods capital, make previous capital goods useless, and change the purposes and extent of use of still other capital goods. That is what "creative destruction" is all about. But this churning of subjective essences requires a fluid stock market wherein resources can easily acquire purpose or be repurposed. The market, especially when large and interconnected, is always changing, and today's prospect will be a losing proposition tomorrow or vice versa. Liquidity is essential for people to take advantage of momentary opportunities.

I am in full agreement with Keynes that the market "rewards" both strategic planning and tactical prowess of a company. For plans are always readjusted according to changing market data. However, Keynes' idea that it would be beneficial to "make the purchase of an investment permanent and indissoluble…, except by reason of death or other grave cause" (*GT*: 160) so as to force investors to think long-term is absurd. The "reason" to sell an investment is that one needs the cash, or that the investment is losing money (and is foreseen to keep doing that), or that one has found an even better investment. Here is how to make sense of his ideas:

1. Speculators do not (or cannot because of uncertainty) care about the future.
2. Which is bad.
3. But the state can and does which is why it would be best if the state took over the direction of investment.
4. Which is a radical proposal that may take a long time to implement.
5. As an interim measure, private investors should be forced to think for the long term according to the proposition above.

Unfortunately, in this scheme entrepreneurial errors cannot be fixed quickly or even at all, one has to wait to die to get rid of worthless paper. For a man who thinks that "our basis of knowledge for estimating the yield ten years hence" of various firms "amounts to little and sometimes to nothing" (*GT*: 149-50), Keynes is far too eager to enforce predictions.

In addition, premises (1) and (3) are highly dubious. Dynasties of

many wealthy capitalists and financiers last for generations; renewable natural resources, when privately owned, are usually lovingly attended to. On the other hand, the U.S. Congress spends with freewheeling abundance – what for these people is another trillion dollars of looted taxpayer money? – and this year's Congress cannot bind next year's in any spending reductions.

Keynes holds that consumption in the short term is a stable element of aggregate demand, while investment is the unstable element. This is because people exercise their "liquidity preferences" and shift money between assets and cash capriciously and apparently randomly. Hence "investment demand" rears up and collapses regularly, leading to business cycles. But it will not do to build an economic theory on some general human irrationality. This is because one man's irrational fear that leads to losses is another man's opportunity to profit at his expense. The more suckers and wimps are out there, the easier it is for a smarter fellow to take their money. In so doing he will be equilibrating the economy and bringing order to chaos. And once the irrational entrepreneurs are out of capital, they will be of no concern to the economy.

Thomas Hall (1990) interprets Keynes as follows. If stocks are overvalued, it pays to start new companies and build new capital; if they are undervalued, it pays to buy the stocks instead. The fluctuations of stock prices thus periodically encourage or depress new business activity. It's unclear, however, what would cause *all* stocks to move in unison toward either over- or undervaluation. It's true that offers of employment depend on profit expectations by the businessmen. But profit expectations do not in a free-market economy undergo wild swings. Or rather there is no global pattern to what numerous individual entrepreneurs believe about future market conditions. Only in a business cycle, sparked by a massive amount of cheap credit that bids up stock prices, do there arise identifiable clusters of entrepreneurial errors.

Even if it were true, as Keynes held, that investors collectively were subject to irrational waves of optimism and pessimism, it would be precisely speculators who would stabilize the economy and prevent "business cycles" based on such waves. Keynes' view about how investment demand and the marginal efficiency of capital in a free-market economy collapse as a matter of course, bringing about cyclical unemployment, does not hold water. Therefore, we affirm, as Keynes rejects, the idea that "the investment policy which is socially advantageous coincides with that which is most profitable" (*GT*: 157).

34. That capital is scarce after all

In Chapter 16 of *General Theory* Keynes claims that an act of

saving entails a diminution of present demand and yet at the same time a failure to boost future demand. Why is he proposing this paradox? The reason, as stated, is this: "An individual decision to save does not, in actual fact, involve the placing of any specific formal order for consumption, but merely the cancellation of a present order." But is it not the fundamental task of the entrepreneurs to foresee future consumer demand? For example, present desires must have been similarly predicted in the past by a previous set of entrepreneurs. Yes, but unfortunately, "the expectation of future consumption is so largely based on current experience of present consumption that a reduction in the latter is likely to depress the former" (*GT*: 210-1). It seems from these passages that Keynes denies that entrepreneurs can do their jobs. But experience refutes this idea. Savings are increased and invested, profits are made, and the economy grows quite oblivious to Keynes' restrictions. Keynes denies that "an increased desire to hold wealth, being much the same thing as an increased desire to hold investments, must, by increasing the demand for investments, provide a stimulus to their production; so that current investment is promoted by individual saving to the same extent as present consumption is diminished." It is evident that Keynes is talking about hoarding as an alternative to both consumption and investment, because saving as he imagines it entails consuming "an unspecified article at an unspecified time" (*GT*: 211). This is the most terrifying for him bugbear of a free society. The discussion of hoarding is continued in (I, 42).

Our author goes on: "the owner of wealth [does not] desire a capital-asset *as such*, [but] its *prospective yield*" (*GT*: 212). Alright, now the point of investing is to receive a profit. Often this means buying undercapitalized goods and squeezing superior services from them over time. But prospective yield is due not to the capital good as such but to entrepreneurial direction of this good in some production process, the *teleological cause* of any enterprise. An act of saving provides only the *Aristotelian material cause*, namely, objects to be used in production. But both are needed: there is no entrepreneurship without capital nor capital without entrepreneurship. Thus, Rothbard (1985) asks: Is the meaning of the term "entrepreneur" merely an "idea man," someone who spots profitable opportunities, or does it in addition incorporate the notion of acting and risk-taking and dealing with unexpected surprises with real capital? There are in this world neither "pure forms" (other than angels and ideas) nor formless matter; all forms are mixed in with matter, so every entrepreneur is also a capitalist because no one can produce anything without capital goods even if those goods are "found" gifts of nature, just as every capitalist is also an entrepreneur because objects that play no part in any actual production plan directed by an actual entrepreneur can in no wise be called "capital." Nor is

prospective yield or discounted marginal value product anything given: it is up to the owner, and no one else, to realize his own profit expectations.

Keynes continues: "prospective yield wholly depends on the expectation of future effective demand in relation to future conditions of supply. If, therefore, an act of saving does nothing to improve prospective yield, it does nothing to stimulate investment." Extra savings will of course increase the supply of money loans and lower the interest rate. Enterprises that are already profitable will find themselves better off; their stock prices will surely rise. And investment will be stimulated into those projects that yield lower returns. Hence savings straightforwardly increase the prospective yield.

Hoarder-savers subsidize consumers by bringing about lower prices. Investor-savers subsidize consumers because they enable them to consume in the present. Keynes inverts this reasoning, saying that "every act of saving involves a 'forced' inevitable transfer of wealth to him who saves… These transfers of wealth do not require the creation of new wealth – indeed… they may be actively inimical to it." (*GT*: 212) Perhaps in this bewildering passage our author has confused *wealth* with *money*. The savers gain money but explicitly deny themselves present enjoyments, i.e., real wealth. Why though is it a *transfer* when the saver saves his own money, and why it is *forced*? By "forced" Keynes could mean "as if according to law," such as the saver will "inevitably" buy stocks which someone will equally inevitably sell to him, but who knows?

Keynes argues that the interest rate (IR) on money competes with the marginal efficiency of capital (MEC) which prevents the MEC from falling below the IR. If the IR were somehow to be lowered, then capital goods would become more plentiful because their marginal efficiency could become smaller. In other words, the supply of capital goods would, Keynes proposes, increase in order to cover those efficiency gains that have been freed up by the lower IR. Finally, at zero IR, capital accumulation would become limited only by technology and supply of labor. Time for Keynes matters only insofar as some consumer demand becomes "effective" at definite dates:

> If, after hearing full particulars of the meals he can get by fixing dinner at different hours, the consumer is expected to decide in favor of 8 o'clock, it is the business of the cook to provide the best dinner he can for service at that hour, irrespective of whether 7:30, 8 o'clock, or 8:30 is the hour which would suit him best if time counted for nothing…, and his only task was to produce the absolutely best dinner. (*GT*: 216)

This is a case in which one insists on consuming at the "right" time, 8

o'clock exactly. Keynes is oblivious to the fact that men seek to minimize the time they have to wait for any future satisfaction the desire for which they already entertain. The idea behind time preference is that dinner at 7:30 is perforce preferred to (the same) dinner at 8 o'clock which in turn is preferred to dinner at 8:30. For time preference, the right time is as soon as possible.

Thus, we read of the "desire to postpone consumption" (*GT*: 214). There is of course never any such desire. Let us recall our analysis of time preference. "Waiting" and the disutility thereof have two senses. First, there is a desire to bring closer or at least make reachable a definite future enjoyment, and relinquishing immediate consumption is a necessary evil resorted to in order to attain a greater good. Present sacrifices diminish disutility of waiting. Thus, Crusoe has a choice of whether (1a) to keep evenly rotating, catching fish with a rod, and "wait" for a much superior net forever; or (1b) to tighten his belt and make the net in 2 months; or (1c) to barely subsist but make the net in 3 weeks. In (I, 24) this was called TP_1. Second, suppose Crusoe picks (1b). But he would also like to build (2) a pen for his livestock. This task will occupy him for 1 month. He has to choose still further between (1b) and (2). The fact that he has to wait less for the pen as compared to the net is an advantage of the former, a pro of it. If Crusoe is to choose the net anyway, then the utility of the net has to outweigh the utility of the pen, even given the pen's lower cost of the time input, to such an extent that the net's overall psychic profit is higher than the pen's psychic profit. This appraisal is TP_2.

What happens, Keynes asks, if the IR is 0? Then time indeed counts for nothing. People are *indifferent* as to when to consume. One would not mind postponing consumption until any future moment no matter how remote which is why we can use the most technologically advanced production processes permitted by our knowledge *regardless of how long their implementation will take*. All entrepreneurs will adopt the most physically productive methods available, ignoring all considerations of time. As a result, technological efficiency will be identical to economic efficiency: the best tech is the most welfare-enhancing. But this means that the economy can no longer grow by capitalists' investing into longer and more roundabout projects: there is "an optimum interval for any given article… – a shorter process of production would be less efficient technically, whilst a longer process would also be less efficient by reason of storage costs and deterioration," Keynes argues. (*GT*: 216)

Given in addition full employment and the MEC of 0, the economy is in a perfect state in that there is for it no possibility of improvement. "Change and progress would result only from changes in technique, taste, population and institutions." (*GT*: 220-1) (Will not

changes in technique make previously accumulated capital obsolete?) Moreover, eliminating interest destroys an important market force which should make things easier for a central planner under socialism for whom production is not an economic but a kind of technological problem. Keynes does not disappoint: "I expect to see the State," he declares, "which is in a position to calculate the marginal efficiency of capital-goods on long views and on the basis of the general social advantage, taking an ever greater responsibility for directly organizing investment." (*GT*: 164)

Keynes babbles something about a society "so well equipped with capital that its marginal efficiency is zero and would be negative with any additional investment" but positive interest rate. (*GT*: 217) This is impossible. The more abundant capital goods are, the lower their DMVP because the money income each good will generate each time period is lower (as the supply of consumer goods rises and their prices fall), but the discount rate, and hence MEC, remains unaffected and equal to interest rate. There can never be "a stock of capital sufficiently great to have a marginal efficiency of zero" (*GT*: 218). Again, Keynes confuses scarcity of capital with scarcity of time.

At zero MEC the perfect situation is zero saving. In fact, if people continue to save in Keynes' paradise, the only effect will be that *more* present goods will be converted into *fewer* future goods due to *negative* MEC. (Meaning that the cost of producing more capital goods exceeds these goods' MVPs.) This is why Keynes argues paradoxically that a poorer community *A* with fewer capital goods will enjoy a higher standard of living than a richer community *B* with more capital goods. The smaller stock of capital goods in *A* means more present consumption, and conversely *B*'s larger stock of capital means destructive *sacrifice* of present consumption; it is evidence of previously irrational behavior. This is why Keynes recommends digging holes in the ground in order safely to dissipate or soak up the money savings and to create incentives for people not to save which will allegedly increase both employment and prosperity.

General Theory sometimes reads like a book of puzzles or sophisms: the problem is to discover how deep the fallacy is hidden within the author's mischievous reasoning. This particular argument is both unsound and invalid.

It is unsound because it depends on two false assumptions. First, interest rates can never be zero but are positive in connection with time preferences. Therefore, the cost of time will have to be taken into account, and some relatively shorter processes will turn out to be most efficient on account of their smaller interest expenses even if they would not be the most efficient if interest rates were (hypothetically) equal to 0. Numerous powerful technologies will be languishing on the shelves,

prevented from being used by consideration of costs, and moreover lengthening the production structure will always be an option. Physical productivity is distinct from value productivity, and the former may be disregarded for the sake of maximizing (according to consumer preferences) the latter (by producing sooner). For that reason, increases in technological knowledge make the task of a socialist central planner not easier but harder as the planner is faced with more and more possibilities of what and how to produce without any rational way of choosing between them.

The market rate of interest is constructed out of the rates of time and risk preferences of all market actors. Interest is not an arbitrary surcharge that wicked lenders impose upon borrowers, it is a primordial phenomenon rooted ultimately in the painfulness of postponing satisfaction of desires for the sake of some greater gain (such as profit from investment or security from hoarding). If human efforts were to be forcibly directed toward construction of more capital goods, then while these goods were being built, consumers would right now be deprived of present satisfactions that they judge to be more urgent than even the greater prosperity that would await them or their progeny in the future.

Meltzer (1988) supplies an intriguing interpretation. “Individuals face this premium for uncertainty but, Keynes believed, society does not. Keynes treats society as analogous to an individual with infinite life.” (304) Elimination of interest then is tantamount to the consummation of utilitarianism. Surely, the greatest good should be pursued for society as a whole including the as yet unborn and unconceived. However, the present generation is not a lost one, doomed to sacrifice everything for their children (and those children presumably for their own children). Consumer goods are like capital goods in this regard: they are an inseparable union of nature and labor-over-time. Man must choose whether to consume now or invest for the sake of future happiness, and this choice cannot be made otiose by government manipulation of interest rates. It is certainly true that one of the greatest motives for accumulation of capital is to provide for one’s children. Moreover, though there exist super-entrepreneurs who achieve stellar success singlehandedly, many more fortunes are made over the lives of many generations. This entails an extension of loving concern for one’s descendants long after one’s own death. Keynes may argue that if everyone loved each other perfectly, then maximization of utility would take place over the entire span of existence of the human species. For example, if people living 10,000 years ago had had us in their hearts and minds, then they might have consumed less, saved more, and made us much more prosperous. (Keynes would probably say instead that they would have set up a modern banking system and expanded credit to the max.) Keynes seems aware of the trade-off, arguing that once full

employment is reached, the state will need to make a "decision on what scale and by what means it is right and reasonable to call on the living generation to restrict their consumption, so as to establish, in course of time, a state of full investment for their successors" (*GT*: 377). But he still clings to his liquidity preference theory of interest.

My response is that economists deal with people as they are, not as they ought to be according to ethical or religious precepts. Economists in their capacity as policymakers seek to order society in such a way as to maximize the narrow happiness of its members. They leave nature and virtue to philosophers and priests. If Smith wants to benefit his great grandsons, then the economist would advise him to save and invest prudently; if he wants to die broke, then the economist would teach him how to do *that*. Even if it is asserted that people ought not to have personal time preferences at all, they do have them, and that is all that the economist cares about. Men's preferences are taken as given and ought to be so taken if we are to remain scientific.

Keynes' concern seems to be relatively slower growth under laissez faire as compared with his zero-IR system. But even in a real non-Keynesian economy, the social rate of time preference will tend to fall with the growth of civilization which will enable new capital to be profitably created and used. Capital accumulation can never bring about a state of affairs in which no improvement in economic conditions is possible or can be hypothesized and tested. But this growth will be moderated by attention to pleasures in the here and now.

Second, the Keynesian utopia seems illogical. It entails that any innovation *X* which has just been put into use in factories, no matter how productive, will be immediately scrapped the moment something slightly better, *Y*, comes along. It does not matter that establishing this newest invention will take ten years; as long as during its lifetime *Y* promises to produce more output than *X* does during its, resources will be shifted away from producing and maintaining *X* into producing *Y*. And then, nine years later, another inventor will come up with *Z* which, let us say, is again somewhat superior to *Y*, and production of *Y* must again stop in its tracks. Technological progress in Keynes' world will ensure that nothing will ever get finished and apparently the death of the entire human race. That means that Keynes absurdly assumes human technological omniscience and has humanity maximizing its collective well-being for a million years in the future or all eternity.

Suppose that not only waiting but also labor is not counted as a cost. Imagine the glorious pyramids we can all build if we joyously invest the backbreaking labor required for their construction. Nothing will be beyond our power. If this sounds silly, then Keynes' vision does too.

In short, Keynes' theory of time's "shadow," interest rates, is

faulty, and that is why he can dream both of removing the check of the needs of present consumption on capital accumulation and of technology-fueled heaven on earth. Even if Smith were (1) omniscient and (2) *everlasting*, he would not be, as God is, *eternal*. Hence, though Smith may live forever, the time spent waiting for a good is still a cost to him. Even if Smith (3) economizes with perfect prudence, having no uncertainty to endanger his plans, he is still endowed with a limited supply of goods; he is not almighty and *chooses*. Smith still distinguishes between past, present, and future and must endure the dissatisfaction of not enjoying something right away for the sake of future utility. Only a fantasist would assume (1) and (2); (3) is equally implausible.

Keynes goes on: "I am myself impressed by the great social advantages of increasing the stock of capital until it ceases to be scarce." (*GT*: 325) This could be interpreted in a couple of ways. First, literally: capital is not scarce when there is no opportunity cost of using any good in any production process. Either (a) consumption of capital is non-rivalrous such as the recipe for scrambled eggs: Smith's use of the recipe in his cooking does not interfere with Jones' use of the same recipe, or (b) capital is superabundant like air. There is a horn of plenty anyone may reach into and grab an additional capital good. Keynes is thinking of a situation in which "capital is so abundant that the community as a whole has no reasonable use for it anymore" (*GT*: 321). MEC = 0 means that any additional piece of capital will only impoverish society by becoming an economic bad, garbage. Roasted pigeons will fly in the mouths of the comrades. Unfortunately, this pleasant state of affairs will not result from elimination of interest, people will not suddenly become omnipotent or able to create such an environment that anything else in it will only spoil their perfect happiness.

Second and more plausibly, that the marginal value product of any capital good is equal to the cost of that good. (The definition of zero MEC is that the future is not discounted when equating the cost of the capital good with its value product over its lifetime. I am trying to make sense of Keynes' supplementary idea that in that case capital ceases to be scarce.) Any more investment will make things worse. Of course, this is exactly what happens in the state of equilibrium. Keynes seems to grasp that point inasmuch as he counsels a "properly run community" to "attain the conditions of a quasi-stationary economy" (i.e., an economy in which any improvement comes about due only to "changes in technique, taste," etc.). But no real economy ever reaches this state. Keynes is "impressed" with a triviality, indeed even with given technologies and zero interest rates, disequilibrating entrepreneurship is possible, wherein resources are reallocated within the economy such that MEC > 0. This can still happen if opportunities to combine inputs in various ways to yield outputs whose sale will be profitable have not

all been noticed and taken advantage of, therefore saving (reallocated to new projects) will still have a social purpose. It is for that reason that Keynes reckons "a single generation" to be necessary and sufficient to convert an economy into an ERE. (*GT*: 220)

However, the economic problem is not solved with the two assumptions (everlasting economy coupled with perfect intergenerational love, as well as perfect technological knowledge) just scrutinized in place. The socialist computation problem still stands in the way of anyone foolish enough to claim that he can reduce production to social engineering. Remember the distinction between *knowledge*, an intellectual virtue, assumed here to be perfect and *prudence*, a moral virtue, not so assumed. Entrepreneurship must still take place, and victories and losses of individual businesses must continue to occur.

As a result, Keynes' main argument is invalid: it does not follow from his assumptions that a "rational" equilibrium (or "quasi"-equilibrium in whatever sense) will be established or that capital will no longer be scarce. The latter can only occur if we argue that *eventually* everything needful will be built which, since time is of no account, translates into "everything needful will be build" or even, collapsing time, "everything desirable that can in principle be built, for all we care, already exists." This is the preposterous conclusion, also given the final premise of supreme foresight and infallible economic calculation.

A real economy will not be perversely imprudent, placing too much emphasis on the present. In a thousand years even under normal growth we should expect human society to advance to unfathomable heights. The apparent contradiction in Keynes' thought is resolved by noticing that he bids the *people* to live like the "lilies" and the *state* to provide until kingdom come. Keynes appointed himself caretaker who would free everyone from worldly concerns.

Finally, there is the matter of *competition*: bringing one's product to the market as quickly as possible not only economizes on interest but also allows one to capture profits for a longer period of time. The more complex and different from everything else one's product is, the harder it is for imitators to reverse engineer and copy it. Therefore, a shorter process may be preferable to a more productive longer process because under competitive conditions Smith's profits may be higher if he comes up with a product quicker. If he waits a long enough time, then Smith's competitors might eventually create a superior (better or cheaper or both) product, and he will have labored for naught.

Keynes' argument is thus a phantasmagoria of absurd assumptions and dubious deductions. Let us steer clear of such delirium.

35. That interest rate is not the root of all evil

If there is any truth to be found in Keynes' ruminations on "own-interest," it is that interest can be obtained in any commodity that is similar in quality to those commodities that have the best track record as media of exchange. Rothbard (2008) enumerates several properties of gold and silver that make them ideal as such media: they are already in heavy demand (which is necessary for the regression theorem to hold), highly divisible, easily portable, have high value per unit of weight, and exceptionally durable. (7) Keynes gives the example of wheat. Wheat is sufficiently moneylike to allow borrowing and lending in terms of itself. (For example, it lends itself to business calculation.) That does not mean, however, that pure or natural interest rate will be distinct from the interest rate of any other commodity; rather, dealing in wheat will modify the actual loan market equilibrium interest rate from the money rate. Nor does it mean that the source of interest is anything other than time preferences. Nor again that nominal interest rates can be negative.

Keynes gives a nonsensical example in which I can buy 100 quarters of wheat for $100 now or for $107 a year from now. Given the interest rate of 5%, he calculates that $100 now can be exchanged for $105 a year hence. This amount will buy (105 / 107) * 100 = 98.1 quarters of wheat. The choice then is between 100 quarters now or 98 quarters later which causes the "wheat-rate of interest" to be approximately –2%. (*GT*: 223) This reasoning is doubly incorrect. First, what I would do is buy 100 quarters of wheat now, lend it at 5% per year interest, then a year from now get it back and sell it for $107. My return is (105 * 107) / 100 – 100 = $12.35. Straightforwardly, the "wheat-interest" in Keynes' sense is 12%. Second, even accepting Keynes' answer, an apt question is, why would I not buy 100 quarters of wheat now and consume them rather than both wait a year and pay more? The reason for these prices is not interest but could lie with the projected conditions of supply and demand a year from now and the state of the commodity futures market.

Keynes defines his terms as follows: let the marginal productivity of a good be q; appreciation of a good, a; the cost of wastage by holding a good, c; and the good's liquidity premium, l. a is increase in value; c is decrease in the physical amount of the good; liquidity is ease of convertibility of a good into another form of wealth, it measures how easy it is to "spend" a good and how suitable a store of value it is. Total return on investment is $q + a - c + l$. For a house (say), this return may be $q_1 + a_1$ (because it yields utility to its owner, is an appreciating asset, does not waste, and is illiquid); for wheat, $-c_2$ (because it does not improve with time, spoils, and is also illiquid); and for money, l_3 (no

appreciation for holding cash, does not spoil, and is highly liquid).

Why is $q + a - c + l$ "own-rate" of interest? Because for Keynes, interest is simply rent, and we have seen what a grievous mistake this is. In particular, Keynes' interest on money is what one must pay the money's owner in order for him to surrender the desired "liquidity"; the higher the l, the higher the interest rate that must be offered. Money's own-rate of interest then is l. (1) In fact, however, a commodity's l has no effect on the interest rate. It's more convenient to lend and borrow in money than in wheat, so both supply and demand are higher for money than for wheat, and the interest rate sticks around. a and c *can* affect the equilibrium interest rate. (2) If money appreciates in value, that is, if its purchasing power increases with time, then the nominal rate will be below the real rate. This is because the demand for loanable funds will decrease because people will be more reluctant to borrow knowing that they'll have to repay the loan with more valuable money, and the supply will increase as the opportunity cost of immediate consumption rises. (3) If money somehow spoils in storage, then people will be more eager to get rid of their money by lending it out. So supply will increase (and if borrowers keep some of the cash, demand will decline), and the interest rate will fall. Of course, the expectation of wastage will increase V in the equation of exchange, while the wastage itself will decrease M. If M is being replenished, then P will rise, and with it the demand for credit. The interest rate will then recover. (4) If a good yields some utility q to its holder over time, then the supply of loans in terms of this good will fall and demand rise in comparison, raising the interest rate. q for money is an aspect of its liquidity as the productivity of money consists in its being a medium of exchange, unit of account, and store of value.

Regardless, a and c do not change the real interest rate which is a reflection of consumer preferences regarding allocation of scarce resources towards satisfactions in a less and more remote future.

Keynes lists more qualities of commodity money that make it unique for intertemporal exchanges. First, its supply line is vertical or almost such. Second, it admits no substitutes: there is unique demand for it due to its function as a medium of exchange. (Hence zero "elasticity of production and substitution.") He then compares monetary interest (in his sense) with interest as might be produced by non-money commodities such as wheat and concludes that in the absence of money the interest rate would be lower. Every commodity in fact would have its own rate of interest depending on its own particular q, a, c, and l. The very qualities of gold, for example, that make it well suited as a medium of exchange, etc. also, Keynes proposes, generate a premium on the interest rate when lending and borrowing are done with money. He goes so far as to say that "those reformers, who look for a remedy by

creating artificial carrying-costs for money through the device of requiring legal-tender currency to be periodically stamped at a prescribed cost in order to retain its quality as money, or in analogous ways, have been on the right track…" (*GT*: 234). This proposal would have the effect of increasing *c* and reducing the "own-rate of interest" of money by –*c*. In other words, it would give an incentive to people to spend their money, particularly by lending it, thereby lowering the interest rate. It is certainly something remarkable to condemn the very institution of indirect exchange solely because, as expected from the meaning of indirect exchange, the medium of exchange is highly in demand. The poverty of the world, a metaphysical evil if there was one, is blamed on properties of precious metals. (*GT*: 242) Three avenues are then open to Keynes in an effort to reduce interest rates.

First, he can lower *a*, e.g., through inflation which would decrease the purchasing power of money. Note that (a) *actual* and *present* inflation lowers the real interest rate, it eats away at the creditor's income. (b) *Expected future* inflation increases the nominal interest rate as lenders seek to protect themselves from actual future inflation. In other words, in the conditions of (1α) unforeseen inflation, the real IR can be below 0. For (2α) foreseen inflation, the nominal rate will exceed real, with both being above 0. If there is (1β) unforeseen deflation, then the real IR will be above the nominal IR, also with both positive; if there is (2β) foreseen deflation, then the nominal IR can drop arbitrarily close to 0 without going below it because at a negative rate it will pay to consume or hoard rather than lend. As an attack of (a) gives rise to (b), Keynes' designs are frustrated. Higher sustainable investment coupled with lower interest rates is achievable only if the supply of savings rises. But creating bank credit out of thin air leads to business cycles and impoverishment.

Second, by increasing *c* in the manner described above. This is supposed to drive people to rid themselves of their money before it spoils or depreciates. As we will see later, this does not work either.

Third, by bringing down *l*. And that is exactly what Keynes suggests. In a fanatical zeal to drive down interest rates, Keynes would destroy the modern economy in favor of some "non-monetary" economy, whatever that means. But the primary mission of money is to serve as a *medium of exchange*. Every other attribute of money serves that function. A complex economy without money is not possible. Afflicting *l* makes no sense because money by definition possesses perfect liquidity, being 100% convertible into itself.

Keynes quotes Marshall's (1964) superb and concise summary of the time preference theory of interest:

> Everyone is aware that the accumulation of wealth is held in check, and the rate of interest so far sustained, by the

> preference which the great mass of humanity have for present over deferred gratifications, or, in other words, by their unwillingness to "wait" (483),

disagreeing with it and saying that poverty "after several millennia of steady individual saving" is due to "high liquidity-premiums… now attaching to money" (*GT*: 242). How do liquidity premiums cause poverty? They result, says Keynes, in higher interest rates and therefore scarcity of capital goods because the marginal productivity of capital cannot fall below the interest rate. People cling to their money and invest less. Keynes' liquidity preference and my risk preference are not necessarily the same. LP determines how malleable people are to depositing their banknotes back into banks, allowing the latter to expand credit even further. LP presupposes the loathsome modern government-banking complex. RP is about human attempts to deal with uncertainty. LP is a contingent phenomenon; RP is part of human nature.

It is true that changes in individual risk preferences influence the interest rate in the short run. In the long run even if the overall liquidity preference is to keep no money for insurance whatever, both incomes *Y* and price level *P* will rise, boosting both supply and demand, and only time preferences will determine interest rates. Only *changes* in the amounts of money intended to be kept in hoards can affect interest rates. Such changes occur predictably only in a bust. Other times risk preferences are an agglomeration of subjective value judgments of the people, not to be questioned. By ignoring time preference, Keynes allowed himself to dream of the impossible. Roger Garrison's book *Time and Money* has an apt title: time gives rise to different valuations of present and future satisfactions, and money as a store of value allows one to satisfy his risk preferences by hoarding more or less. But what puts a limit on future economic growth is not scarcity of money or high demand for cash balances but the people's desire to consume and enjoy life in the present.

Keynes argues that the rate of interest "may fluctuate for decades about a level which is chronically too high for full employment" (*GT*: 204). But the state of full-employment equilibrium is compatible with any interest rate. In fact, the higher the interest rate, the slower the growth, the fewer capital goods are used in production, the more backbreaking labor will be for workers. Let me suggest therefore that for Keynes, "full" employment means not "everyone is working" but "everyone is working at peak efficiency." Full employment subsumes not only lack of *un*employment but lack of *under*employment, as well. We saw in the previous chapter that according to Keynes, only a zero-interest rate economy can produce full employment in this absolute sense.

Keynes thought that consumption was a "stable" element of aggregate demand. Now risk preferences exist because of future uncertainty. Uncertainty causes one to keep a cash balance just in case, leaving it unsettled when the hoard will be spent. Then the amounts of money allocated to hoarding and investment must constantly vary, especially according to the animal spirits of the entrepreneurs. Fear dampens the spirit, courage rouses it. One's prudence and courage then affect time and risk preferences which determine the amounts invested and hoarded and hug the will representing consumption from both sides. Together they influence the currents of business. It may be that an individual entrepreneur fears his competitors, but Keynes is concerned with the general state of the economy, the overall atmosphere of optimism and pessimism.

Investment is supposed to be volatile because of competition and the fleeting nature of profits. Profits and losses in round n of production impact what will and will not be produced in round $n + 1$ in their capacity of permitting (though not necessitating) or precluding even rotation. Now though production depends on expected consumption, consumption depends on actual production. If actual production is unstable, then a fortiori consumption is as well.[22] In other words, (1) expectations of consumer demand drive (2) investment which (3) yields output which (4) offers choices to the consumers. The volatility of (1) explains the volatility of both (2) and (4). Perhaps Keynes would admit that consumption is erratic in terms of the goods and services that are available and bought on the market but insist that it is less so in terms of the amount of *money* allocated to it week after week.

The alleged stability of consumption tricked Keynes into thinking that (unstable) investment is traded off for hoarding and that only liquidity preferences are relevant for the determination of interest. Of course, even granting the assumption, it is a non sequitur, and the conclusion is false, anyway.

Meltzer (1988) confirms this interpretation: "For Keynes, the major problem was to reduce instability, thereby lowering risk and increasing investment. … Keynes believed that the level of uncertainty was greater than necessary and therefore, suboptimal." Now if uncertainty meant, for example, that the government could expropriate anyone's property at will or that human civilization was in such early stages of development that dangers loomed everywhere even in daily lives, then lowering these kinds of uncertainty would be most praiseworthy. If this goal could be furthered by changing the "institutions," on which Keynes "placed considerable emphasis," then let us reform away. But that was surely not Keynes' take on this matter. He must have realized that uncertainty is generated by human action itself. This is why he considered "shutting down the stock exchange" and

"giving the state, acting through boards of public-spirited citizens, responsibility for deciding on the level of investment" in order to reduce uncertainty. (5-10) This quest for "stability" and lower "uncertainty" is the cornerstone of Meltzer's interpretation of him. Keynes wanted to create a still world in which almost nothing happened. Any progress would come from investments by the state which at some point too would cease. What bothered Marx was "anarchic production," what bothered Keynes was that humans produced at all rather than pursued "love, beauty, truth, timeless contemplation." All of his ideas about interest rates, uncertainty, hoarding, eliminating the scarcity of "capital," a fantastic variety of "controls" to be imposed on society, etc. were in the service of a crackpotty utopian vision in which the "economic problem" would be "solved" (34-5).

To be sure, prosperity can civilize the world. Mises (1996) points out that the cause of "intellectual and moral perfection, wisdom, and aesthetic excellence" is best served by having society "provide an environment which does not put insurmountable obstacles in the way of the genius and makes the common man free enough from material concerns to become interested in things other than mere breadwinning" (154-5). Even Marx (2008) argued that capitalism has "rescued a considerable part of the population from the idiocy of rural life" (14). Economic growth makes beauty, etc. more affordable. But Keynes goes too far. There is no special moment in human history where it makes sense to freeze the economy and command people to get busy "contemplating." The apotheosis of man's active life is not a *state* like some land of Cockaigne but a *process* of never-ending improvement and the market process in particular. It does not work to bring about "contemplation" by abolishing *action*.

As uncertainty goes, so does creativity and hence culture. McGilchrist (2001) quotes physicist Lee Smolin: "On a personal level, to think in time is to accept the uncertainty of life as the necessary price of being alive. To rebel against the precariousness of life, to reject uncertainty, to adopt a zero tolerance to risk, to imagine that life can be organized to completely eliminate danger, is to think outside time. To be human is to live suspended between danger and opportunity." (1244) Keynes' project is hopeless.

Now consider the large number of variables that Keynes takes as "given" in Chapter 18. These are: "the existing skill and quantity of available labor, the existing quality and quantity of available equipment, the existing technique, the degree of competition, the tastes and habits of the consumer, the disutility of different intensities of labor and of the activities of supervision and organization, as well as the social structure including the forces… which determine the distribution of the national income." With these, he aims to find out the "volume of employment

and the national income" (245). Surely then Keynes' "general theory" is profoundly short-run. It is part of the very meaning of the long run that, say, capital is accumulated and new technologies appear. How can Meltzer say that Keynes had a vision of low interest rates in perpetuity throughout the universe? Let me suggest that Keynes was *an interventionist in the short run*; and Keynes was *a socialist in the long run*.

We saw that people have both time and risk preferences. Keynes objected to both. Time preferences signify purposiveness, concern with the remote future. Risk preferences signify uncertainty, and hence fear and grit. Both are apparent obstacles to the pursuit of "ideals." In Keynes' vision, the individual is to be purposeless and passive, with the state taking care of him. By driving the interest rate down to zero, Keynes hoped to compel at the same time (a) people to live in the present, as per Lk 12:27, and (b) the state to be maximally wise. Keynes should be viewed as a prophet who thought he had seen heaven and tried to duplicate it on earth. His economics was merely a quest for the mechanism that could facilitate the transition. But interest – and time preferences that give rise to it – are eternal categories of human action; they cannot be eliminated in the way that a superior consumer good supplants an inferior one. Likewise, uncertainty, understood as the combination of risk and surprises, such as the complexity of the physical world, the ordinal nature of human valuations, human creativity, and entrepreneurial competition, is also a permanent fixture of human existence. I discuss the "stamped money" scheme designed to create zero interest rates and endorsed by Keynes in (I, 49).

In a strange passage Keynes explains that "unemployment develops… because people want the moon; – men cannot be employed when the object of desire (i.e., money) cannot be produced and the demand for which cannot be readily choked off" (*GT*: 235). This could mean one of two things. First, that people cannot be employed in *producing money*. Would it not be nice if there was a huge money-creating industry that could provide employment to millions of people? I realize how crazy this sounds, but I would not put anything past Keynes. What seems to be a great blessing, namely, that almost any money supply is optimal and can serve society as well as any other money supply and that precious scarce resources do not need to be expended on creating money, Keynes appears to consider to be a curse. I imagine that the existence of such an industry would make it unnecessary to bury banknotes in coal mines, etc. Keynes' preference, in addition, is a recipe for hyperinflation.

Second, that demand for money by entrepreneurs is so great that they refuse to hire workers except at negligible wages. But of course demand for money has two sides. If entrepreneurs refuse to part with money except for a high amount of factor services, then they will also

agree to acquire money in exchange for a large amount of the goods and services they produce. Low wages thus coincide with low prices, and there is no unemployment. This interpretation makes no sense either. We are back to Keynes' inflationism and his belief that all is fair in attempts to lower the interest rates: "inelasticity of supply" of gold is "at the bottom of the trouble" (*GT*: 236).

Remember that Keynes imagines a perpetual insufficiency of consumer spending and capitalist investment. These are claimed, in addition, to cause unemployment. Fortunately, as the money supply rises wildly, jobs are created. For Keynes, the government in deficit spending and the central bank and commercial banks in money and credit creation can do no wrong. How much is enough? We will see the natural reductio of Keynes' notions in (II, 7).

Keynes continues with a discussion of stickiness of wages. When Keynesians say "sticky," they mean perversely sticky in the way that prevents equilibration. I have suggested several reasons why nominal wages may in practice tend to be somewhat sticky even under laissez faire. Keynes mentions none of them. Money-wages are sticky, he says, because money is a stable commodity, its supply is constant. Moreover, "the expectation of a relative stickiness of wages in terms of money is a corollary of the excess of liquidity-premium over carrying-costs being greater for money than for any other asset" (*GT*: 238). Again the condemnation of money for being money.

Besides, Keynes proves too much. Why are wages singled out from among all prices as being sticky? Perhaps what Keynes wants to argue is that with the money supply held constant, the "price level" will go down, and quantity and quality of goods will go up, *at a fairly slow rate* due to economic progress. This is true; what's more, to restate the point made in (I, 32), the price level may be supported by the equally slow increase in the money supply due to mining precious metals (or even cryptocurrencies) that constitute money under laissez faire. However, even if the overall price level is not volatile, relative prices can still fluctuate at pleasure. High l makes money suitable to be (a) a medium of exchange; close to zero a contributes to (b) making economic calculation easy; and low c imbues the commodity with utility as (c) a store of value. But these things are a far cry from declaring the market to be crippled solely on account of the properties of various media of exchange.

In the short run, then, Keynes sought to vest the state with unlimited power to conduct monetary and fiscal policies; in the long run he coveted socialism in which

1. the government in producing and owning the means of production is not bothered by future uncertainty and so is *infallible*;

2. it is *omniscient*, having complete scientific and technological knowledge of all things; and
3. it is *perfectly prudent* as in provides for human happiness until the end of time.

Modern-day Keynesians are embarrassed at such pretenses, and for that they are to be commended. But Keynes was like Marx in the sense that his economics was meant to shore up his "religion." The economics makes no sense otherwise.

36. That "forced saving" is rather fraudulent consumption and investment

The Hayekian notion of forced savings must be rightly understood. It applies most straightforwardly to the modern world with its highly peculiar banking industry and this industry's dubious concern for the property rights of its own clients. Keynes writes: "Thus 'forced saving' has no meaning until we specify some standard rate of saving." (*GT*: 80) Very well, let's do just that. The standard rate of saving is that which corresponds to the aggregation of individual decisions of every member of society of how much of his income he wants to spend and how much to save (that is, invest or hoard).

But the central bank and commercial banks lead the people into a situation in which it appears that there are much more savings than the public actually chooses to set aside. Time preferences and interest rates are made to seem lower than they really are. The banks, by extending credit with money they do not own, disregard consumer choices. They have taken over the community's decision of how many present goods will be available in the economy. They have despised the will of the people and in a sense trampled on their autonomy. In other words, the situation is as if the banks' customers have loaned to the banks much more money than they actually have loaned to them. Society is forced by the nature of the banking industry without the consent of the citizens to regard their rate of savings (of that money which they put into banks) as much higher than it really is. Though this state of affairs is socially vicious, banks themselves take advantage of it voluntarily and happily; as Rothbard (2008) writes: "The banks do not chafe under central banking control; instead, they lobby for and welcome it. It is their passport to inflation and easy money." (134) What's good for the banks is not necessarily what's good for the country.

There is a crucial and ancient distinction between loan banking and deposit banking. Loan banking is concerned with channeling money brought to the bank into loans for other entrepreneurs and consumers

for purposes like starting a business or buying a car. The bank lends out the money at a higher interest rate than what it pays the person who himself lends that money to the bank. Banks charge for their services as intermediaries or middlemen who connect savers with borrowers more efficiently than could be done without them. In this sense banks are similar to, e.g., job headhunters who help companies find employees and professionals find work. Deposit banking on the contrary is more like putting one's money for safekeeping. Now it is the bank's customer who pays the bank for guarding his property in a money warehouse, e.g., the bank's vault. The key difference is that in loan banking it is the bank that becomes the owner of the money which it promises to repay the customer with interest at some specified later date, whereas in deposit banking the customer retains the ownership rights and to him money is due at any time on demand. Neither type of banking in its pure form is inflationary.

What *is* inflationary is when deposits are treated as loans to the bank. There is indeed a great temptation for a bank (warehouse) owner to treat them as such. In the case of commodity money, if the banker correctly estimates the amount of gold that will be redeemed, then he can print a number of fake warehouse receipts for the rest of the gold in his storage and lend them out. In so doing he will be creating money essentially out of thin air by letting these fake receipts circulate equivalent to cash. This is how banks pyramid credit on top of deposits. Instead of keeping 100% reserves (i.e., the amount of cash in the bank's vaults ready for instant redemption), they keep (a lot) less, thereby engaging in *fractional-reserve banking* (FRB). This is the standard way banks today operate, notwithstanding the fact that FRB is inherently fraudulent and a type of embezzlement precisely because there is not enough cash in the bank to satisfy the legal rights of all its customers. The bank's assets are due to it on some later dates, whereas its liabilities are instantaneous.

The situation has deteriorated to such an extent that there is no longer such thing as deposit banking for money, even checking accounts today usually earn interest. Although banks of course still provide safe deposit services to their customers, people do not store money in their boxes but only unique valuables. Since new money at the moment of its creation may be considered to be representing banks' own hoards, forced saving is actually *dishoarding* and forced use of deposits for consumption or investment. The money can be considered to be savings only from the point of view of the banks whose owners are prevented from consuming the money they create but must instead loan it out: the fraud would then be *too* conspicuous and outrageous. This comparison bears further discussion. What if indeed the bankers consumed the money entrusted to them by their customers by buying mansions and

yachts and jet planes? How would that be different from the present practice of loaning the money out at interest? In both cases the banks in a perfectly immoral manner hold only a small percentage of their deposits in reserve, keeping their fingers crossed against a bank run. That bankers cannot spend their depositors' money is an accident of law; if they could, then this would be merely FRB taken to its logical conclusion. The answer is that though there is no legal difference, there is an ideological difference: inflationary credit expansion is thought to be in the interest of the whole society. I submit that this ideology is false.

Fisher (1926) makes a distinction between insufficiency of cash and insolvency. (43) Now it is true that a bank that is being run on may be able to sell its loans (or mansions, etc.) to another bank in order to generate quick cash. There are two situations in which this will not be possible, and insufficiency of cash will lead to insolvency. First, if credit is already expanded to its allowed limits overall, and there is no reserve left in the system to accommodate credit contraction due to withdrawals of the cash that serves as base for the expansion. However, it is likely that some reserves will exist. It seems therefore that, second, only global distrust in the entire banking industry wherein runs on numerous banks occur can cause a financial collapse. This is an instance where the economic argument buttresses the moral one. Expansion of credit with money created out of thin air generates the business cycle. When there is a bust, the banks' assets become toxic, i.e., worthless. They keep fractional reserves yet are unable to convert their defunct loans into cash. It is both impossible and senseless from any (including ideological) point of view to give one or two banks the privilege to print money and withhold it from other banks. Either every bank acts crookedly or no bank does. In the first case, every bank is unjust to its customers. But the fact that everyone sins does not absolve any individual sinner from guilt. It may be objected as follows. It is true that commercial banking as a business model has disappeared. On the other hand, it is perfectly alive and well. I have a safe deposit box at my bank in which I keep my gold coins. I could easily store all of my cash in $100 bills in it, as well. If I needed then to pay my credit card bill online, I would go to the bank, deposit the requisite sum from the box to the bank, go home, and make the payment. My money would thereby be 100% secure against the FR practice. Why are not I and many other consumers doing just that? And if we voluntarily surrender to the FR system, then where is the impropriety? A reply could be that FRB is a legal "monster" because more than one person becomes exclusive owner of the same money. But why is that important? Fraud is failure to deliver according to contract. So far, my bank, though FR, has discharged its obligations to me with admirable consistency. If Smith sells thirsty water-inflated cows (priced

by their weight) to Jones, then one does not need to be an economist to smell a rat. But with FRB, one must accept the Austrian business cycle theory and have reflected on the classics deeply in order to conclude that eventual fraud is inevitable at some point in the life of a society with unsound money. One might hesitate to accuse people of serious crimes based on a roundabout story like this. Very well, allow me to rephrase. The argument becomes: FRB is a vicious economic system. It impoverishes society. As an extra consequence of this badness, it is bound to result in a cascade of villainous behavior by the banks. In other words, when fraud occurs, it will be not by one con man of an old lady but massive in scope, involving millions of people and billions of dollars. That fraud is veiled in economic complexity does not strip it from its essential character as deception as a result.

The economics and ethics of banking are connected. If it were not for business cycles, the only way banks would end up committing crimes is during a nationwide bank run. That this would ever happen is implausible. However, the economic bust, itself inexorable, reveals and forces out in the open the hitherto concealed unwholesome conduct of the bankers.

Again, the banks can be bailed out when they go bust. If the government does it, e.g., by buying banks outright, then this is socialistic, not to mention unjust to the taxpayers. It is true that under socialism private property rights amount to little. But socialism is dead. If the banking system is a remnant of socialism, then it must be immediately reformed as a moribund fiend. If the central bank does it, countering credit money deflation with fiat money inflation, then it is both inflationary and futile. The people may get their money back this time, but (1) it will be money of lower purchasing power, and (2) the day of reckoning is merely postponed. The fraud remains.

At its simplest Smith gives $1,000 to Jones for safekeeping, telling him that he is going away for a little bit but may come back anytime. Jones promptly uses this opportunity to loan this amount to Robinson who then spends it on Brown's goods who then spends it again on Green's goods, etc., such that the money becomes impossible to trace. There: Jones is not just a fractional- but zero-reserve "banker." Smith thinks he has the money but is mistaken. In the closed system involving only Smith, Jones, and Robinson, fraud has been *committed* against Smith but *not yet detected* by him. Suppose that a year later Jones gets the loan back with interest and replenishes his "reserve," and a few months afterward Smith does ask for his money back. We can see that through sheer luck no one got hurt, no one's interests were harmed. Yet clearly what Jones did was unethical. Indeed it is so unethical that there ought to be a law against it. Jones *might* have some remedies in case he's found out. When Smith after a few months comes back and demands his

money back, if we open this system up a bit, then (a) Jones might be able to borrow money from another banker (in the form of a true loan) to generate reserves. Open it up some more, and (b) Jones would be able to sell his asset (Robinson's debt, future money) quickly for present money and pay back Smith. If one bank has been unlucky, and many of its Robinsons have defaulted, then it has no recourse to (b). But (a) is still available. If there is *mass* illiquidity, then (a) too becomes problematic: no bank can lend to another because that will entail still further diminution of the lender's reserves, something precisely every bank is in need of during the crisis. If mass illiquidity is further augmented with a collapse of confidence in the banking system, and bank runs are occurring, then the final symptom of the disease appears: general insufficiency of cash and final insolvency.

In an open FR system, the fraud is disguised because not only does it not get detected until the collapse of the whole system, but it is not known which of the banks' customers will get the short end of the stick. Who whom, and so much for the harmony of interests that would prevail under laissez faire. If we define natural law for human beings most generally as "you shall not do evil," then I admit that in the normal course of the life of a society with dishonest banking it may be hard to conclude unequivocally that natural law is perpetually being violated, e.g., that "a bank is always inherently bankrupt" in Rothbard's terms (2008: 99). Perhaps we can argue that the idea of both having your money available on demand and receiving interest on it is self-contradictory indeed like having your cake and eating it too. It's "unnatural" and ultimately impossible. So the courts must judge any such contract perverse and invalid. Further, positive law defined as "you shall do good" is certainly not heeded by the legislature insofar as FRB as a whole is antisocial.

In short, I am attributing to the people an *ideological* naivete (in this particular sense), failure to look after their own *collective* interests. They think, when they think about it at all, that inflation and credit expansion are for the greater good. They might labor under the Keynesian delusion that interest rates should be driven down to zero. They might imagine that FBR is the only viable business model for banks such that without it they won't survive. They might believe that the central bank fully "controls" the money supply. None of these are true.

The pyramided credit can be extended either for purchasing consumer goods or for investments. Therefore, it is more "forced consuming" or "forced investing." (Though it may be said that the difference between *actual* saving by the people and the banks channeled into investment and *planned* saving by the people alone is "forced saving.") In other words, banks by creating credit override actual

individual choices over the distribution of income, their time preferences, and their risk preferences. Credit expansion does not "accommodate the *demand*" for loans, it increases the *supply*, falsifying interest rates and increasing *quantity demanded*. Demand stays the same. Under honest banking, higher demand would be accommodated by a higher interest rate. As Huerta de Soto (2006) argues, FRB harms third parties and can for that reason be condemned.

FRB then is a serious deviation from the bourgeois morality underpinning the natural order of laissez-faire capitalism. It's a chink in our armor of righteousness that would otherwise have ensured peace and progress, a "chief loose screw" in our monetary system as Fisher (1939) called it. Our economy generally then is capitalist based on respect for private property rights, but the banking system within it is not, resting on an institutionalized shell game.

The solution is for the government to enforce 100%-reserve banking for demand deposits with extreme punishments for breaking the law. If succeeding at this requires that bankers who dare to keep fractional reserves be hanged in public executions, then so be it. Suppose it will turn out that this crime will be very difficult to detect; the law, expensive and inconvenient to enforce; and the crime's consequences, highly pernicious to society as a whole though not immediately to any individual victim (so no citizen will file a lawsuit). We'd have these "banksters," FR counterfeiters, subverting the very lifeblood of the economy, money, with impunity and laughing at justice with contempt. Well, then, let's ratchet up the brutality. Increase punishments to them so much that the threat will still make them think twice whether they want to break the law. If only the death penalty to them is sufficient to safeguard the welfare of the commonwealth, then it's a price I will be willing to pay (even if, by the way, I *personally* happened to be in business of running a bank).

I argue in this book against government interventionism, but allowing FRB seems to be on the contrary anarchic, precisely nonintervention, like allowing theft and murder to go unpunished. Free banking, even under gold standard, is not "market economy," it's a war of banks against the people. It won't do, for example, to define the "market," as Cassidy (2009) does, as "people pursuing their self-interest." In such a case, thieves and murderers would also be pursuing their self-interest, and no one would say that thieves and murderers are a happy part of social cooperation. On the contrary, the basis of individual freedom is natural law and private property. Where there is no property, "freedom" is meaningless. FR freedom is license to steal. The conclusion is that we get into trouble both when the state exceeds its prerogative and when it falls short of it.[23] FRB with its credit expansions is to a great extent responsible for the booms and busts that

regularly defile the capitalist civilization. Bolsheviks and Mensheviks both seize on this, gleefully blaming capitalism for these calamities. But since this practice violates the depositors' property rights, it is fraud and hence *anti*-capitalist. We need more capitalism, not less.

Paul Krugman (2009) argues that the reason for the government to insure bank deposits is to protect "widows and orphans" from losing their savings because they made the mistake of entrusting them to the wrong bank. But we can see that under 100%-reserve banking the widows and orphans are *perfectly* protected. Deposit insurance is a band-aid on a seriously wounded system. Krugman himself realizes this, pointing out that insurance gives rise to moral hazard whereby taxpayers are on the hook to pay for banks' bad investment decisions. As a result, banks end up channeling capital to projects that, from the consumers' point of view, should never have been attempted.

Keynes objects: "there is no special virtue in the pre-existing rate of interest, and the new money is not 'forced' on anyone…" (*GT*: 328). Yes, there is because the natural rate governs the intertemporal allocation of factors of production. The "forced" rate checks the actualization in the economy of the public's time preferences. This means that it is *coercive* over those preferences and therefore *hurtful* to the people as all violence naturally is hurtful. Since Keynes denies that interest rates are influenced by time preferences, he would not care for this understanding: "a forced *deficiency* of saving is the usual state of affairs" (*GT*: 80), deficiency to be overcome by credit expansion via the state's monetary policy or even by socialism. Recall that under modern banking abstention from consumption (and hoarding) does not seem to be necessary for the generation of investment funds. On the contrary, investors' requests for loans from banks call forth "savings" in the form of bank credit out of thin air.

Banks are in a manner of speaking not autonomous institutions. They collectively depend on the central bank for the supply of money and on their customer-borrowers for the demand for loanable funds. (Though not completely because individual savers decide how much of their wealth to keep in the bank and how much in banknotes.) Consider the idea of a price-taking firm, used in some textbooks to illustrate the concepts of equilibrium and perfect competition. If such a firm sets the price below that of its competitors, then it will lose money; and if it sets the price above that value, then it will lose all its customers. In the real world, price taking is a complete abstraction. A person considering where to invest studies how close each industry is to an equilibrium and how fast it is moving toward an equilibrium. If an industry is showing lackluster growth, then other lines of business and other firms will likely entice him with expectations of profits. This shift in investor attention in itself lowers the equilibrating pressures on that industry. If a company

finds itself a price taker, then it can exclaim, mad at its own foolishness, "That it should come to this!" A price taker in the books of the neoclassicals is uniquely helpless. He is neither an innovator nor imitator, he does not act at all, he is not human. Not for mainstream economists is the heroic entrepreneur. They revel in the alleged irrelevance of the individual personality in human affairs. But there is something to be said for this picture with respect to banking.

Recall that firms compete by (a) developing new products and (b) lowering costs of production. (a) splits into (a_1) actual goods and services and (a_2) marketing, branding, advertisement, creating goodwill – in short, every way of exciting consumer interest for (a_1). (b) can be effected by means of (b_1) cheaper factors or (b_2) cheaper or more efficient techniques. (b_2) can in its turn be subdivided into ($b_{2.1}$) building things and ($b_{2.2}$) managing people. In most industries (e.g., phones) both (a) and (b) take place; in an idealized wheat industry, say, competition occurs through (b) only. But in money creation there is neither (a) nor (b). One cannot improve upon a number in a database that signifies account balance, and the cost of producing money is zero. It's true that banks can compete with each other on the keenness of their discernment of more or less creditworthy borrowers. But under central banking and deposit insurance this factor is seriously attenuated since customers care about things like ATM availability and very little about banks' competence at investing their money. Since the government does not allow banks to fail for any reason, banks take much less care to allocate money capital in the best interests of society.

Now phone vendors sell phones and wheat farmers sell wheat, but banks sell not money but "time," i.e., instant gratification. Nevertheless, given also that the amount of money that banks can create is limited by their reserve requirements, i.e., by positive law, if one bank fails to expand credit to the max, then the interest rate will rise only by a negligible amount which means that banks are determined in the *quantity supplied* of money: their individual profit maximizing strategy is to expand in such a way that the overall group expansion is by the entire money multiplier (equal to one divided by the reserve requirement ratio). On the other hand, the interest rate depends fully on consumer demand such that that rate must be discovered by the banks at which all the new money finds borrowers. So, banks are *price* takes, as well.

37. That business cycles occur from corruption of interest rates

The business cycle I am interested in explaining is not one of the many benign cycles such as seasonal fluctuations in business activity, or

the coming and going of holidays, or those that can be attributed to unique though possibly repeatable events like wars or natural disasters in which the alleged boom is simply the process of long-term growth unfortunately interrupted. Nor can "creative destruction" be likened to a business cycle as Schumpeter apparently believed (2008: 83n), the creative part being the boom, and the destructive part the bust because both disequilibrating and equilibrating kinds of entrepreneurship are, when successful, socially virtuous, moving resources to their most valued uses, and moreover the creation and destruction occur at the same time. It is equally implausible that any technological improvement, no matter how groundbreaking, can raise the economy of a nation to dizzying heights of fruitless onanistic activity and then plunge it down to terrifying lows. A new and promising technology *can* cause minor overinvestment such that a number of the goods produced will fall through the cracks due to intense competition and have to be disposed of below costs. This, however, is merely the daily yin and yang seeking balance. A boom is like agitation due to a mental illness; excitement over an interesting method of production is like jitters from drinking a little too much coffee. The former is dangerous to health, the latter is not. The "jitters" are also self-regulating: excessive optimism increases the demand for credit which raises the interest rate which by itself curbs the enthusiasm and weeds out the least confident marginal entrepreneurs.[24] Things like Kondratieff cycles are mystical hand-waving, no credible cause has ever been given for them to occur. Nor again can a surge in investment at the expense of present consumption be a cycle, with unemployment due to readjustment of the production structure, because this is not a cycle at all but secular growth.

Keynes attributes a recession to a general collapse in profit expectations. But why should these expectations suddenly be revised downward en masse to cause a bust? He claims that boom-time capital accumulation will lead to capital saturation and even excess capacity. But we don't live in an evenly rotating economy. There are always investment opportunities. And even if the economy were approaching equilibrium, why should that necessitate a collapse when the equilibrium is precisely the steady state? Once enough durable goods are accumulated, Keynes proposes, the demand for them falls off, their producers suffer, and there is a slump. The slump is reversed when existing durable capital goods fully depreciate. Now orders for capital equipment do not all take place at once. Even if they did, either the entrepreneurs would have taken into account the gap between orders, or they would never have invested into their production in the first place. "The machine industry reckons with the average 'life' of its products no less than do the tailors, the shoemakers, the manufacturers of motorcars, radio sets, and refrigerators, and the construction firms." (Mises 1996:

584) There is no need for mass losses. There is always technical progress, so why must entrepreneurs wait for the wearing out of old capital equipment to replace it rather than invest in new capital equipment? And just what is the connection between the state of business confidence, physical productivity of capital goods, and their value productivity? Which kind of productivity "collapses" and why? Keynes supplies no answers to these questions.

Another interpretation is that Keynes held that there is a "correct" level of investment at each rate of interest, itself arbitrarily set by the authorities. Deviations from this rate by general overoptimism (about the marginal efficiency of capital) cause a boom, and deviations by general overpessimism cause a slump. On the contrary, there is a uniquely correct interest rate for every economy, and the volume of investment corresponding to a wrong interest rate is also wrong. Moreover, each individual investor is optimistic or pessimistic in his own way, and there has to be some objective feature of the cycle that causes all entrepreneurs to err in one or the other direction.

What I have in mind are man-made cycles that viciously misallocate scarce resources and impoverish society. The cycles are due to a kind of human self-condemnation in which a community (i.e., a people under a government) deliberately wills evil to and harms itself, and identifying business cycles is essentially a study in man's self-destructive behavior as expressed in the process of production and in legal institutions, especially as government against the economy.

The boom, though seemingly a happy time, is an illusion, it constitutes not sustainable growth but wasteful use of factors of production. Numerous long-term projects are launched, most of which have no chance of being completed at a profit (though this is not apparent during the boom) and will inevitably be abandoned halfway through. The boom is bound to be revealed as uneconomic, be reversed, and result in a recession and painful readjustment of labor, high-order capital goods, and land. This cycle is fundamentally injurious to prosperity, moreover the *entire* cycle is to blame for malinvestment and similar ills. It is not the recession that is to be feared, the preceding boom itself should be avoided if economic destructionism is not to commence.[25] Booms are not "economic expansions," they are *attempts* to expand that fail. In other words, contra Krugman (2009), it's not true that a recession "undoes years of economic progress" (184). A recession reveals that what *seemed* to be progress was in fact counterproductive and represented severe misallocation of resources from the point of view of the consumers and their welfare. The boom wasn't progress, it was ultimately pointless busywork that failed to bear fruit.

A crucial feature of the business cycle is the rise in the prices of high-order capital goods such as raw materials, construction equipment,

heavy industry machinery in the boom and the fall in their prices in the recession. Of course, in an inflationary regime, consumer goods' prices rise absolutely in both booms and recessions quite despite the fact that capital goods' prices rise relative to consumer goods' prices in booms and fall relative to them in busts.

The Austrian theory, as developed by Mises, Hayek, and Rothbard, is that the business cycle originates with credit expansion primarily through the central bank's easy money policy and the practice of fractional reserve banking. Exactly how the process of money creation works is explained in full detail in Rothbard (2008) and Huerta de Soto (2006). It is a scam on the scale of trillions of dollars raised to an art form yet brazenly asserted to be for the "greater good."

The basic sequence is this. First, the Fed buys an asset, say, someone's car, on the "open market," gives the seller a check, and this way new *fiat* money is created. Second, the check is deposited into a commercial bank, and the bank pyramids new *credit* money on top of the new reserves. The interest rates are lowered as the supply of credit rises. This is one situation in which the producer loan market, absent from the evenly rotating economy, plays a crucial role. The visible interest rate is influenced by the demand for credit by entrepreneurs. Suppose that even under sound money and honest banking there is a hot new technology that excites investor enthusiasm. An unusual number of people believe there are great profits to be made by employing the tech. We saw that the increase in the demand for credit raises the interest rate and automatically dampens and moderates the boom. On the other hand, in the present system in which inflationary credit expansion is a staple, the boom goes out of control. Interest rates are the most important prices because they pervade the entire economy. Yet when the government manipulates this price and sets it to the wrong value, that is, other than what the unhampered market would have set instead, it makes numerous production decisions irrational.

What happens is that banks end up having at their disposal a great deal of money, far more than is actually saved. Since they cannot consume this money and must loan it out, the economy becomes awash with credit. This lowers the money rate of interest and increases quantity lent / borrowed with, however, the rates of time preferences of the general public staying the same. This is an essential observation because normally fluctuations in interest rates are a consequence of changes in values. (Changes in time preferences are not the only reason for changes in the intertemporal allocation of resources, but it is sufficient for our purposes that they be acknowledged as one such reason.) Lowering the interest rate through monetary policy bypasses the "free market" channel of lowering it and for that reason has profound consequences.

The evil of credit money inflation was long understood, e.g., Marshall (1964) fingers "the instability of credit" as the culprit behind "introducing disturbing elements into modern industry" (573), going as far as to say that "reckless inflations of credit" is "the chief cause of all economic malaise" (591). For example, the "swollen tide of credit, which culminated in 1873, had undermined solid business, impaired the true foundations of prosperity, and left every industry in a more or less unhealthy and depressed condition" (478).

The natural or "true" rate of interest or TIR is one determined entirely by the people's time preferences, and the "false" rate of interest or FIR is one corrupted by monetary influences and specifically by inflationary credit expansion. (Both TIR and FIR are of course expressed as ratios of sums of *money*.) Though the natural rate is determined by the synthesis of individual time preferences, this rate cannot be known, it is merely the price that would prevail under 100%-reserve banking. FIR is in one sense an equilibrium rate: whatever the banks want to loan out the entrepreneurs borrow and vice versa, the supply of and demand for credit still meet. But it is a disequilibrium rate in that the intertemporal allocation of real capital is led away from the pattern preferred by the consumers. The information about real factors and their supply and demand within the structure of production can be distorted by monetary trickery; the money prices convey deceptive signals. The amount of real resources saved and earmarked for investment by the consumers is smaller than it seems by looking at the interest rate. As a result, the initial response of the economy, the boom, is toward (bad) disequilibrium not toward equilibrium – as defined by the real factors. "Any monetary change which alters the pattern or distribution of the spending stream away from the pattern consistent with the underlying real determinants will create an unstable situation." (Cochran 1999: 120) In the case of credit expansion, the distortion and alteration are particularly gross. The government's monetary policy is a destabilizing influence. The Keynesian policy prescription, though ostensibly aimed at "stability," brings about results opposite those the Keynesians want to achieve. Unemployment and resource idleness are not alleviated by easy-money policy but caused by it.

In the normal case, resources are reallocated from relatively short and already existing processes into longer processes as marginal companies with the short production structure shrink or go out of business due to lower consumer and derived demand for their products. In so doing they release their factors of production which are moved into (that is, bought by) firms that are undertaking projects that take longer to complete. The lower time preferences and interest rates signal to the new producers that the consumers are more willing to postpone present consumption for the sake of future prosperity relative to the

previous state of affairs. The consumers are instructing the entrepreneurs to provide for a more remote future. The income to the time factor declines, reducing the cost of doing business to time-intensive projects. Longer and more productive projects obtain an advantage over their shorter and less productive rivals because of the lower interest expenses. There is a boom in the industries producing capital goods most remote from the consumer goods. In other words, the lower interest rate stimulates investment into more roundabout or more time-consuming methods of production, specifically the high-order capital goods industries and the earliest production stages.

Business cycles arise as a medium-term consequence of credit expansion. While wages and prices are still low, the new money obtained by freshly minted entrepreneurs is used to slurp up the factors of production. In response to this outrage, consumers, the firms operating in the late stages of production, and the factors employed in those stages are stupefied. “Wait a minute,” they say. “We do not remember authorizing you to take these factors off the market for your own use. We want them back because we want to consume *now* and are not, contrary to all appearances, willing to wait until your (admittedly more productive) projects are ready. You thought you received *commodity* credit, actual capital goods obtained from reduction of consumption that were supposed to bear fruit in a more distant future. Instead you were led up the garden path by receiving only fiduciary or *circulation* credit created out of thin air by banks.” This marks the second part of the business cycle introduced after a period of time which may be called “Consumers Strike Back.” As the new money spreads to the factor owners, those owners bid on consumer goods, causing their production to become profitable again. The rise in the prices of consumer goods encourages the producers of these goods to expand too. The heightened competition for the means of production boosts their prices.

It becomes obvious that there are *too many disequilibrating entrepreneurs in business* demanding scarce resources, and only the best of them can succeed. The others have no choice but to go bankrupt. There are not enough complementary factors of production to satisfy all entrepreneurs. These factors are too scarce and become too expensive for all the projects to be completed at a profit. It matters how an initial equilibrium in an economy not racked by earth-shattering exogenous shocks (such as literal earthquakes) is disturbed by drunk-with-credit disequilibrators during the boom. If the monetary and on its heels real disturbances are too great, then unpleasantness ensues.

Credit expansion is an attempt at magic, that is, at trying to get something from nothing. What results is a *war between the factors* – other than time: capital, labor, and land – which numerous companies are

earnestly trying to use in both short and long projects as costs and demand seem to tell them. Their prices rise rapidly, demolishing the expectations of profits. This is not normal entrepreneurial competition but rather something quite unique, namely, *mass failure*.

This phenomenon may be called malinvestment or overconsumption. The investment is in enterprises not approved by the consumers. The consumption is in excess of that amount that would allow sufficient savings to maintain the higher investment. Some of the longer production processes may prove profitable despite all obstacles but most will not. During a boom the production structure is being stretched or torn apart. Credit expansion takes the economy away from its production possibility frontier. As soon as the happy entrepreneurial forecasts by the eager newcomers are revealed as faulty, present mass losses both (1) result in and (2) are exacerbated by low confidence and insecurity and inaugurate the end of the boom. (Losses both feed and are fed by pessimism.) The bust or depression is the process of cleaning up the mess.

There are two components to credit expansion: (1) money supply inflation followed by price inflation and (2) lower interest rates. Inflation, whether of gold or fiat currency, can lower interest rates in the short run. This is because the supply of loanable funds rises immediately as new money is printed, putting a downward pressure on the interest rate, but the demand for loanable funds rises very gradually and after a delay as prices rise one after another as the new money spreads throughout the economy. Another mechanism is that if the Fed buys corporate bonds, then it bids up the prices of those bonds, and higher bond prices entail lower interest rates. These could generate a business cycle, though credit expansion, through its money multiplier, greatly amplifies the fluctuations in the interest rates. “Even a rapid increase in the production of the precious metals can never have the range which credit expansion can attain. … Moreover, only a part of the additional gold immediately increased the supply offered on the loan market. The greater part acted first upon commodity prices and wage rates and affected the loan market only at a later stage of the inflationary process.” (Mises 1996: 574)

Inflation and lower interest rates are individually necessary and jointly sufficient for the business cycle to arise. Lower interest rates without inflation will be a normal situation of an increase in the supply of genuine savings created by abstaining from consumption. Inflation without lower interest rates would be simple theft or transfer of money income and the wealth bought with its help from the last recipients of new money to that money’s first recipients, from creditors to debtors, and from large cash holders to spenders. But the two together cause the mischief known as the business cycle.

In the simplest of terms, inflation stimulates consumption, credit expansion stimulates production. More elaborately, *banks* create credit out of thin air. This lowers the interest rate from r_1 to r_3. In response to the lower rate, the *people* save less, raising the rate to r_2, such that $r_1 > r_2 > r_3$. They redirect these savings to consumption. As a result, there is more of both. However, these are contradictory impulses that cause the productive forces within society to clash with and exhaust each other. The increase in both investment and consumption in money terms is an "absolute" effect. There is both overinvestment and overconsumption. The fact that the *over*investment is induced by the central bank's policy and is contrary to the interests of the consumers – who will not stand for it for long and will bring about the bust – qualifies to call it "relative" *mal*investment or un-utilitarian misallocation of resources.

Consumer demand is boosted immediately, spurred by its low opportunity cost due to artificially low interest rates which reduce the amount of voluntary savings. It is further boosted step by step as factors spend their new money. Finally, the concomitant inflation subjects the entrepreneurs producing consumer goods to a kind of money illusion. These firms receive profits but in money of lower purchasing power. If they imagine these "paper profits" to be genuine, they might consume them such as by distributing the dividends to the shareholders without realizing that they cannot maintain capital on what remains. The pressure on the production structure to shorten increases further.

Keynes' idea that the cause of unemployment is not direction but insufficient volume of investment then is the exact opposite of truth; it's precisely the *mis*directed *over*investment in a boom that causes unemployment in the bust. In addition, far from some overproduction or general glut, there is *under*production of the goods actually desired by the consumers. Investment turns out to be malinvestment, and consumption turns out to be beyond what the people really want. Both destroy capital and reduce the standard of living.

A boom is like a woman who is only healthy enough to bear two children at the same time who is made to carry five with the result that all five are miscarried. And since the business cycle is entirely the result of interventionist government policy, this is less a miscarriage than deliberate state-mandated economic abortion. In this case, Austrian economists are firmly pro-life.

Skidelsky (2010) argues that Keynes endorsed budget surpluses to restrain demand when needed. Moreover, "an important contribution of Keynesian fiscal policy to the golden age was to keep inflation under control by methods which did not bring about the collapse of the boom" (127). So, the banks, both central and commercial together, ignite a boom by inflationary credit expansion. One way to avoid a bust is somehow to defuse inflation. Enter Keynes' government budget

surpluses. The government taxes and hoards in order to drain or mop up the excess money that would otherwise be consumed. Investment is stimulated, but consumption does not pick up. We have a virtuous sustainable boom! Think about the delicious irony. First, the Austrian business cycle theory is implicitly accepted. Second, crude economy-wide policy instruments are substituted for a subtle aggregation of numerous individual decisions of how much money to consume, invest, and hoard. Finally, even if the policies work perfectly and the bust is avoided, the people are harmed because the state rides roughshod over their time preferences. The masses of people in their capacity as consumers and savers would prefer one rate of growth, but the state forces on them a different rate. We must judge the coerced boom to be detrimental to the happiness of the commonwealth.

The government plays its interminable game of monetary and fiscal policies because it does not know, and if did know, could not set, the correct interest rate. Sometimes the government-enforced rate is too low, other times, too high. The resulting chaotically shifting disequilibrium results in business cycles. Keynes was apparently pessimistic about the power of monetary policy to promote full employment. It is clear, however, that monetary policy definitely has enough power to initiate the business cycle.

Some writers point to surveys of business opinions which seem to suggest that businessmen generally ignore the interest rate when deciding to invest. But what matters is not the average businessman but the marginal businessman and indeed the marginal business project. Since the banks will lower the interest rate until all the new money is loaned out, those entrepreneurs and projects will exist in sufficient quantities to kick off the boom.

When I say that credit expansion begets business cycles, I can mean several things. First, that credit expansion due to a change in the law that required 100% reserves to permitting fractional reserves will trigger a boom. Second, that creation of fiat money by the central bank will also result in more credit expansion and in a business cycle. Third, that the *state of affairs* of *credit being expanded* is, though a background condition of the economy and present in both booms and busts alike – though crucially to a different extent – will cause a steady series of booms and busts. This condition is like a sea on which a boat, i.e., the economy, wobbles from side to side: a boom is triggered when the waves and the wind move the boat in one direction, and a bust results when the boat under its own weight rocks back in the other direction. Now credit expansion increases the supply of credit, but once its inflationary consequences have worked themselves out, the demand for credit rises as well because everything is now more expensive, thereby raising the interest rate back to its natural rate.[26] If the Fed doubles

down on credit expansion, actual inflation comes to be expected. Demand for money loans at the old interest rate rises as borrowers seek to take advantage of the diminishing purchasing power of future money, and supply falls as lenders wish to compensate for the same. Hence there is no escape from the rise in interest rates.[27] It's a fallacy that, as Keynes believes, the interest rate can be kept permanently low which "may enable the so-called boom to last"[28] (*GT*: 322). At first glance, this would seem to exhaust the effects of cheap credit. However, credit is expanded in a boom and contracted in a bust. Both conditions are thereby fulfilled: in an expansion interest rates are still grotesquely low, and the bouts of money supply inflation continue unabated made possible by bouts of *deflation* that precede them.

38. Business cycles, cont.: A housing boom

The inner cause of the business cycle is the divergence between the natural and money interest rates, between the TIR and FIR, artificially brought about by credit expansion. The higher the people's time preferences, and the lower on the contrary the FIR, the greater the debt bubble will be. It will occur when the borrowed money goes into a particular sector of the economy such as technology stocks (in which case we are dealing with an investment boom) or real estate (which gives rise to a housing boom which is the subject of this chapter). The key variables are (1) who gets the new money first in an inflation and (2) how this money is spent or invested. It is likely that there will be a bubble somewhere as *some* industry is bound to exhibit more activity than all the rest, and it is that sector that will burst first, paving the way for general depression. Various political factors like the push to make housing more "affordable" including for people who were scarcely creditworthy, privileges to government-sponsored enterprises Fannie Mae and Freddie Mac conspired to ensure that it was housing prices that skyrocketed between 1998 to 2006.

Consumer nondurables including "necessities" are bought habitually, constituting autonomous consumption that is somewhat more independent of income. During expansions income to factors of production increases, and people consider this to be "found money," due to fortune, something above and beyond the level of their permanent income, something that will not last. Perhaps people are now better able to spot the booms. Therefore, consumer durables are wont to be more in demand at that time. Houses could host the bubble because houses generally tend to appreciate in value unlike, say, cars – in particular, they straddle the line between durable consumer goods and investments, because to evaluate them requires only average competence unlike, say,

artwork, and because they are big ticket items: most people need to borrow money in order to buy houses, the very activity that credit expansion stimulates. In addition, the housing market has an inelastic supply which means that an increase in demand will significantly raise prices. This contributes to the bubble.

At the same time I must object to "theories of consumption" on Austrian grounds. Keynes' "psychological law" is a joke, and postulating patterns of consumer expenditures is futile. Consumer desires and spending are simple and atomic ultimate givens, not amenable to any analysis. That Smith spent his bonus on a new car today does not mean that he will spend his next-year bonus on another car, another consumer durable, or anything at all rather than save it. Nor does it mean that Jones will mimic Smith in his purchases. How can economists seriously believe that "given an individual's education and wage history, expected income over that person's lifetime should be stable"? To be sure, Hall adds that this is so only "barring unexpected events like an accident that causes permanent disability or being discovered by a television producer to star in a soap opera" (1990: 57). But every human life presents its owner with both numerous pitfalls to be avoided and numerous opportunities to improve his well-being and income in particular to be seized. That is the veritable essence of living! Carpe diem and all that, after all. Life is an adventure or should be, unforeseen "accidents" are an inescapable feature of everyday life, and one "discovers" something new within and without himself all the time. But though an economist cannot *predict* Smith's *future* destiny even after a thorough scrutiny of Smith's life up until now, he can *explain* his *past* moves.

If much of the new money goes into houses, then housing prices and the prices of the factors that enter into constructing those houses will increase and eventually go sky high. They will go up in the first phase of the cycle to the point where it is no longer profitable even for people with high time preferences to borrow even at very low interest rates. This event is fully in accord with the law of marginal utility: the marginal present dollar loses utility as present goods are obtained, while the marginal future goods sacrificed increase in utility as debt accumulates. Even the most extreme present orientation has limits.

During the evolution of the bubble there will arise three classes of people. First, those, call them the "consumers," who will borrow the money for fun, that is for the pleasure of ownership. This class will be extremely sensitive to changes in the interest rate. Second, there will be the "speculators" or house flippers who add fuel to the fire. They speed up the rate at which the bubble inflates. They borrow for profit. Even if the speculators expect trouble, the opportunity is too great to pass up. The third group is the "investors" who naively believe that there is no such thing as the bubble and that the prices of their houses will

appreciate forever. Successful speculators are the only group that benefits from the monetary expansion. The boom is started by the consumers, continued by the investors, and spurred by the speculators.

For example, as prices climb upward, it is possible to buy a house and profit by reselling it later. At some point, the *consumers* stop buying, though their actions have already raised the housing prices considerably. But *speculating* has not ended, and moreover the *investors* continue buying, still banking on an upward trend in housing prices. The investors almost willy-nilly become caught up in the boom even when the latter has run its course. The reason is that it is never clear exactly when the consumers have had enough, and the boom continues on its own inertia even after the prices by all reason should have reached their zenith. But as prices go up still more, even investors become more cautious.

The bubble will pop as soon as general price inflation seeps into the rest of the economy. The new money will spread there as house sellers and speculators spend their profits on other goods. In that case three causes will cooperate to bring about higher interest rates. (1) Actual inflation will raise the demand for credit. (2) Expected inflation will up the nominal interest rates. (3) The central bank may tighten the money supply in order to cool off the economy, initiating credit contraction and therefore lower supply of credit. As borrowing fizzles out, so does the demand for houses whose prices are going to fall. At this point there are two possibilities. (a) If a consumer or speculator obtained a variable-rate loan, then his monthly mortgage payments hit the roof immediately. (b) If he, especially as a speculator, somewhat more luckily has a fixed-rate loan, then it still makes no sense for him to continue paying for an asset that is now worth a fraction of its previous value. He may end up defaulting and abandoning his house. The banks lose enormous amounts of money and curtail lending and raise interest rates, which drives the prices even lower.

It will be instructive to discuss Paul Davidson's (2009) account of the housing bubble. He defines something called "orderliness" which is some arrangement to "convince holders of the traded asset that they can readily liquidate their position at a market price close to the last publicly announced price. In other words, orderliness is necessary to maintain liquidity in these markets." (86, italics removed) He and I are in full agreement that surprises in the life of an entrepreneur happen as a matter of course; more generally, that the future is uncertain; and that therefore assets are never fully safe. But the conclusion he draws from this metaphysical condition is erroneous: "the primary function of financial markets that trade in resalable assets is to provide liquidity" (88). In fact, the *primary* function of financial markets is to guide ownership of real assets, capital goods, commodities, land, and so forth

into the hands of those who will be most capable of using these things for serving consumer welfare.

I agree with Davidson and Keynes that "a capitalist system needs liquidity to function" (104). But I deny that liquidity is something imposed on the free market from the outside, say, from the nonmarket central bank or the government. Liquidity is an attribute of any piece of property when it is somehow in demand. It is simply the ability to sell an item for money. There is nothing that ties liquidity to financial markets in particular. Whether a thing is liquid or not at a given price is determined by the interplay of supply of and demand for that thing. Now to be sure, if nobody is buying or selling anything, then there is neither market nor social cooperation. But such a state of affairs is deeply implausible. Division of labor ensures that exchanges will continue to be made forever. I also realize that it is an important problem for those who run a trading floor how efficiently to put buyers and sellers, merchants and customers in touch with each other. But whether the solution is an ancient bazaar or modern online trading, this is merely a technological problem not an economic one.

Davidson claims that the problem with exotic derivatives that were traded during the housing boom was that highly individualized mortgages were combined, divided, packaged, and sold as generic securities, such that "there was no possible way that investors or rating agencies could evaluate the worth of financial assets that combine many mortgages into one investment vehicle" (99). Here, as in a number of places in his book, Davidson ascribes irrationality to market agents. Why would people buy stuff whose return on investment they could not even guess? My answer is that investors did evaluate the securities quite competently but, counting on the continuation of the boom, were hoping to beat the market, namely, to escape before the bubble popped. Once again, this behavior is individually rational and unavoidable. Stupidity of investors cannot be an explanation for the housing bust because a bust requires *mass* stupidity, mass errors, and there has to be a cause of such universal delusion. That millions of people simultaneously made numerous entrepreneurial errors is implausible unless there was an institutional factor that somehow deceived all of them.

At any rate, there is a simpler and this time decisive objection to Davidson's argument. Does he not realize that every *stock* is individualized, as well? Every company is unique. Yet *mutual funds* that combine various shares of numerous corporations thrive and receive no condemnation from our author. The securitization of mortgages went bad because of the business cycle and the particular form that the housing boom took, *not* the other way around. Ordinarily, there would be nothing wrong with such an innovation.

In the first place then, an asset can lose "liquidity" if there are no

buyers for it at the price that the seller would prefer. Of course, the seller would prefer to sell at as high a price as possible. If an asset becomes "toxic," then the seller has to lower his asking price. Why is that perfectly ordinary market situation somehow beyond the pale for Davidson? Suppose further that I am a buyer of securities and would like to buy at a low price. However, the asset is expensive as I judge it, and I choose not to buy. Is *this* situation abnormal, as well?

The point is, there is symmetry between buyers and sellers. Davidson would arbitrarily privilege the sellers relative to the buyers by having the Federal Reserve, say, stand ready to buy their junk whenever they cannot find customers for their securities. Now to this Davidson might reply as follows. "Buyers are themselves 'by nature' privileged relative to sellers. The former have perfectly liquid money; the latter, much less liquid assets and property. My aim," he would continue, "is to equalize the system, so that sellers enjoy the same power over their assets as buyers do." I am afraid this will not do at all. The things that buyers and sellers hold are not identical except for their degree of liquidity. Money is just a medium of exchange, stocks are claims to real property. The former is liquid but does not earn interest. The latter are indeed less liquid but can increase in value. The trade-off cannot be avoided. Any investment is risky and uncertain but possibly profitable to which an alternative is to hold money which is safe (without inflation) but brings no gain.

At any rate, if the Fed or the government routinely props up the prices of assets, then we are no longer dealing with a free market but with a faux-socialist system. The buyers have a diminished incentive not to make mistakes. If the Fed can print up trillions and buy all the worthless assets, then the entrepreneurial capitalist system actuated by the stock market ceases to exist. "Illiquidity" is simply a condition of an investor having made an entrepreneurial error in his trading. It happens all the time, is perfectly normal, and the market has a way of dealing with such miscreants by taking their money away from them. Without this natural punishment, the stock market is a socialist joke.

Davidson goes on: "The central bank can either directly or indirectly make the market for securities by reducing the outstanding supply of securities available for sale to the general public. The public can then satisfy its increased bearish tendencies by increasing its money holdings without depressing the market price in a disorderly manner. Until, and unless, the public's increase in bearishness recedes, the central bank and the market makers can hold that portion of outstanding liquid assets that the public does not want to own." (91) Now as of the moment of this writing I have an old printer that I would love to get rid of. Unfortunately, it is "illiquid" which means nothing more than that I might not be able even to give it away. If Davidson had

his way, then if I had any political clout, the Fed could bail me out by buying the printer from me. Is our author willing to go that far? What can happen is that the companies being traded can go out of business altogether, and the Fed will still be buying their trash at high prices. Davidson wants the government to buy the products of bad entrepreneurs to give them "profit opportunities" and ensure full employment. The government is to be the "buyer of last resort." This scheme is neither capitalism nor socialism: it's complete economic chaos. Anyone can start producing any sort of useless junk (or even literally garbage that would otherwise have to be thrown away at a cost) and be assured of a ready buyer for it who will pay for it with newly printed cash. The incentive to produce goods that actually satisfy the consumers bites the dust. It's difficult to imagine a more effective way of destroying the economy.

A thing is illiquid for a reason. But what is Davidson's rationale for bidding the authorities to buy stuff that nobody wants? It is to avoid "deflation" during a recession, to prop up the prices of companies "too big to fail," regardless of how toxic their assets become. He wants to pull the wool over the eyes of the people, to mislead them into thinking that the boom is not over, that resources have not already been severely misallocated. Davidson dares to say that the "determination of the price" at which the government should buy the toxic assets is "beyond the scope of this book… Clearly the price should not be so low as to cause a collapse of the entire banking system, nor should it be so high as to reward management and stockholders despite their errors." (100) In other words, this price is arbitrary, and such questions are "political rather than economic ones" anyway. (104) Perhaps the price should not be so high as to cause the present political regime to lose power in the next election from incensed voters who will rightfully smell a rat. How asinine is that?

Davidson reads like a dictator. We must "shut down financial markets that do not have a market maker institution." But, he himself objects, this will cause investors to go abroad in search of higher profits. Very well, "a modern-day version of the Keynes Plan would prevent U.S. residents from trading in foreign financial markets that the United States deemed detrimental to American firms that observed SEC rules while foreign firms did not." Moreover, the government must "force financial institutions to be either ordinary bank lenders creating loans for individual customers in a private financial market or underwriter brokers who can deal only with instruments created and resold in a public financial market." The SEC should "prohibit securitization that attempts to create a public market for assets that originated in private markets," even though any time a company goes public, it does just that. (97ff) Shut down this, prevent that, force the other, prohibit something

else; like a bully, Davidson likes to push people around. How this squares with his desire to preserve capitalism, if that is indeed his desire, is not clear to me.

For our author, orderliness of the stock market simply means absence of busts. But there *are* busts because there are booms. What is he going to do about them? The key is total control. In a pathetic imitation of a sadistic prison warden (as in the movie *Fortress*), Davidson imagines moral hazards everywhere and tries to plug holes in human actions so as to prevent irresponsible investing. But as soon as one hole is plugged, people will seek their happiness in yet another unapproved by Davidson way. Nothing short of complete regimentation of the capital market and therefore socialism of the German pattern (in which *ownership* of the means of production is nominally private but *control* of them is exercised by the state) will "work." The "orderliness" of such an economy is the order of a graveyard. Like some ancient Marxist, Davidson has not reconciled himself to the "anarchic" production of capitalism and to the fact that liberty is the mother not the daughter of order.

The real reason for the problems Davidson decries is the control of money jointly by the Federal Reserve and commercial banks. With depressing predictability, he blames laissez faire for the deeds of the state.

39. Business cycles, cont.: An investment boom

An investment boom like the one that occurred in the 1990s in technology stocks has a somewhat different dynamic. Here there are no "consumers," just speculators and investors, and moreover the expectations of high profits have to be kindled by something like a hot new bundle of technologies which seem to promise great productivity gains, unheard of consumer happiness, and basically the moon. Once again the trouble comes from the deep gulf between the TIR and the FIR. The amount of "forced" or fraudulent savings available greatly exceeds the true amount. The only way for these savings to be used is by lengthening the temporal structure of production. The low interest rates assure the entrepreneurs contemplating such an expansion that the costs of the time factor will be for the time being relatively low. Projects that would otherwise be unprofitable because of high interest payments suddenly cease to be submarginal and come within the range of cognizance of the businessmen. Consumers do not mind waiting for more physically productive processes to be rolled out. Or do they? In reality, this is only an illusion because consumption does not decline, a fact necessitated by the high time preferences. This sets off a tug-of-war

for the factors of production between consumption in the lower stages of the temporal production structure and consumption in the higher stages the setting up of which has been stimulated by the artificial lowering of the interest rate. There is a production possibilities frontier between present and future consumption. Higher *voluntary* net saving and curtailment of immediate consumption move the economy along the curve; once the goods invested into are produced, the entire curve moves outward. Forced saving attempts to short-circuit this process, and the results are catastrophic: a cluster of errors and inevitability of mass losses and bankruptcies.

In a healthy economy, lower interest rates and higher investment demand increase the "marginal efficiency of capital," and lower consumer demand decreases it, though crucially to different extents depending on the position of this good within the structure of production. Goods are reallocated toward those uses where their marginal efficiency is highest. Inflationary credit expansion does not diminish the derived demand, so there is no downward pressure on prices. Investments into more physically productive roundabout projects compete for the same things employed by the firms operating closest to the consumer. There are not enough resources within the economy to satisfy both the desire for more pleasures now and the desire for more pleasures in the future. Capital, whether real or human, is after all scarce. Given the tempting technologies, such as the internet, then, dot-coms are flooded with investor cash. This allows these companies to bid away existing labor and capital from the respectable old guard. Unfortunately, the competition from below (in the production structure) is not weak as it would be under a laissez-faire monetary system but rather fierce, given the consumers' actual unwillingness to spend less. The demand for immediate consumption remains high, indeed grows, while the supply of the consumer goods drops, putting an upward pressure on prices. As Achilles says in the movie *Troy*, "Someone has to lose."

As I had occasion to emphasize earlier, capital is a fluid concept. Why can't the new producers pick up their capital from nature, as suggested by the new technologies, for example? For we are surrounded by "stuff." Why can they not invent new capital and attach new and so far unheard of subjective essences to things yet unused? Why must the new firms necessarily demand the same capital used by the old firms? In the first place, to make new capital one must use old capital. Secondly, if such things can happen, then the increase in productivity is indeed a free lunch. It will not spark a business cycle. But after all such innovations are for the time being exhausted, there will still be opportunities for multiple uses of old capital goods already working in the later stages of production. Credit expansion ensures that this

situation will occur.

It is a necessary condition of an unsustainable boom that factor prices rise unevenly and especially within a certain sector of the economy. If *money supply* inflation could cause *price* inflation by raising all prices at the same time by the same percentage, then there could be no business cycle. After all, any money supply, given enough coins or bills to facilitate daily transactions, is optimal for a society; it is only changes in the money supply that are not neutral in the short run. The bust comes when lengthening the production structure has reached a limit set by the amount of new money infused into the fastest-growing industry. Each temporal stage, indeed, adds an interest payment. Even with a lower interest rate, there can only be so many new stages. The longest production processes will come to be on the margin, their profitability most sensitive to increases in interest rates. As credit expansion begins the boom, so price inflation ends it. Competition for factors from the shorter consumer goods industries will sooner or later so raise the factor prices as to decimate the profits of all but the most sagacious businessmen who decided to expand by using the new set of technologies. Consequently, prospects of high profits for the high-tech firms will be dashed, resulting in a loss of confidence, a now revealed malinvestment and impoverishment, and the bust.

Let us now identify the reasons why people fatefully set themselves up for losses. First, entrepreneurs often buy factors of production in succession, and when they buy them for their early production stages, they fail to foresee that the factors in the later stages will increase in price dramatically with time. Thus, an entrepreneur does not borrow $12M and pay his factors for a whole year's worth of services. Rather, he borrows and spends $1M every month or plans to, except that in month 10 he is dumbfounded to realize that he needs to borrow $1.5M at a startlingly higher interest rate to pay his workers. The cause is the inflationary effects of the previous months' payments by other capitalists who, like him, were hoping to profit with cheap credit. *Inflation is ratcheted up with time*, so is consumption, and so is the competition for (a) factors and (b) present money or credit. This is the lag that causes unrealistic expectations to persist for a period of time. Since entrepreneurs know exactly neither where in the production structure they are nor how inflation is planning to fan out throughout the economy, these cost increases are largely unanticipated and surprising.

We can see how this lack of knowledge turns the stock market into a casino and entrepreneurs into gamblers. The entrepreneurs' social function – to serve the consumers – is put into jeopardy as their profits and losses come to depend on sheer luck regarding the exact path the continuation and collapse of the boom take. The situation is not helped

by raising the prices of finished goods, hoping that the increased amount of money out there will generate sales. The contention here is that these goods will never *be* finished. It is physically impossible to satisfy everyone's demand for the required factors of production. There is only so much real and human capital available. The prices of factors, like all prices, are a sign of the factors' scarcity relative to the demand for them. Prices ration them among the entrepreneurs. High prices of goods and labor are simply the market's way of denying these factors to some entrepreneurs who will have to give up and liquidate their projects in midstream.

If we replace a single firm executing a long project with multiple firms in different stages of production, then late-stage firms that were expected to buy the newly created capital goods refuse to do so as inflation has made these goods extremely expensive. The earliest-stage firm that would suffer a loss if it started producing destroys the whole production structure (because losses make even rotation impossible), and the still earlier-stages firms are taken with it into oblivion.

Second, due to *winner's curse* in which the winner of an auction (such as our auction for factors) is often the person who is forecasting the highest profits and is most optimistic about the value and productivity of the factors on which he and others are bidding. But cockeyed optimists risk more and are more prone to losing. With an unusually high number of entrepreneurs contending for the factors under credit expansion, the winner is betting that he is more correct in his entrepreneurial vision than all others and so is that much more likely to make a mistake in his assessment of profits. In other words, the more entrepreneurs are in the game and the more projects are thought by these entrepreneurs to be viable, the more real the possibility of a significant erroneous overestimation of the market value of a factor becomes, and every entrepreneur will need to outbid *that* fellow, the one who is trying mightily to curse himself, in order to get the resource. Even if there are no obvious errors, there is a fine line between optimism and recklessness. Thinking oneself a businessman superior to everyone else is not always the most prudent thing to do. Yet easy money strengthens the incentives to people to do exactly that.

Third, if we get away from the idea of an instantaneous auction, then it is possible that resources will be shifted from companies involved in short projects into those involved in longer projects and back a number of times, each time costing more. These reasons entail that many projects will be *started* but never *completed for profit*. In the housing boom, most houses are actually built, though once the bubble pops, the construction of some unfinished houses is stopped halfway through. In the investment boom, most consumer goods are *never* completed, and those that are have to be sold below costs.

An objection to this account is that it neglects "rational expectations." The reply is twofold: first, in order to have rational expectations, it is necessary to be guided by the correct economic theory, and there is a great deal of disagreement about that even among economists. Second, entrepreneurs are neither omniscient nor totally ignorant. The reality is that these people are thrown into an economic cesspool: they must either compete or disappear:

> Even if entrepreneurs have "perfect" knowledge of the events to come, they cannot shy away from the effects of an expansion of credit since their very profit motive will inevitably lead them to take advantage of the newly created money. In fact, even if they understand the dangers of lengthening the productive structure without the backing of real savings, they can easily derive large profits by accepting the newly created loans and investing the funds in new projects, provided they are capable of withdrawing from the process in time and of selling the new capital goods at high prices before their market value drops, an event which heralds the arrival of the crisis. (de Soto 2006: 536-7)

It is possible to succeed in any situation; peace is good for business, but war can also be good for business, etc. There is no escaping attempting to outcompete other entrepreneurs not only during normal times but also during the boom when the economy is bursting with money and credit.

Therefore, accusing banks, say, of reckless behavior during the boom makes no sense: it is true that an opportunity to exploit easy money is not identical to actually exploiting it, but taking advantage of the opportunity for any market actor is (1) legal (in fact, ideologically sanctioned) and (2) unavoidable and a dominant strategy regardless of whether everyone else will do the same or even and especially if they do not, as per the prisoner's dilemma. The errors banks make in lending the newly created money are not avoidable with sharper discernment. If a bank or company that borrows from it "cooperates," i.e., fails to expand, then the other market actors will leave it in the dust for the duration of the boom. For example, Enron cooked the books because it wanted to make itself more attractive to investors at the time when those investors were stuffing cash into dot-coms. Madoff's Ponzi scheme took advantage of the boom by promising unrealistic returns, and it did deliver, for a while.

Notice, however, that it was the market not the government's Securities and Exchange Commission that brought the Enron stock down to zero, and it was the market not the SEC that exposed Madoff. At any rate, there is a fine line between fraud such as failing to abide by the

terms of the contract and poor entrepreneurship wherein one is to his own ruin seduced by promises of high profits. Contracts are formal transfers of property titles and are enforceable, promises are neither, yet they resemble each other in all other respects. It may not be necessary to feel pity for Madoff's victims except insofar as they share in our common fate of a depression following a boom.

Credit expansion manifests itself not just in lower interest rates but in more risky loans at the same interest rates. This contributes to the instability, but again individual banks cannot be blamed for this. Mises concludes:

> There are no rules according to which the duration of the boom or of the following depression can be computed. And even if such rules were available, they would be of no use to businessmen. What the individual businessman needs in order to avoid losses is knowledge about the date of the turning point at a time when other businessmen still believe that the crash is farther away than is really the case. Then his superior knowledge will give him the opportunity to arrange his own operations in such a way as to come out unharmed.
>
> But if the end of the boom could be calculated according to a formula, all businessmen would learn the date at the same time. Their endeavors to adjust their conduct of affairs to this information would immediately result in the appearance of all the phenomena of the depression. It would be too late for any of them to avoid being victimized. (870-1)

Again, only one's performance relative to other entrepreneurs matters. Some market agents' expectations will be more rational than others'. One cannot avoid testing his own "rationality" (in my terms, prudence and courage) in the real world against that of his fellows regardless of the circumstances. Even if only very few can win, every entrepreneur thinks that he will be victorious. It is perhaps "human nature" to hope in the face of impossible odds. Unfortunately, the objective conditions of the economy demand an unusually high rate of loss.

Keynes seems to understand business cycles in a topsy-turvy fashion. In the Austrian theory, when interest rates are forced down by the expansion of credit, all sorts of "entrepreneurs" smell the sweetness of these rates and crawl out of every nook and cranny to borrow money. For Keynes, however, this effect is nugatory. The Great Depression, he thinks, was caused by "an extraordinary willingness to borrow money for the purposes of new real investment at very high rates of interest." In a boom, "investments which will in fact yield 2 per cent in conditions of full employment are made in the expectation of a yield of, say, 6 per cent, and are valued accordingly. When the disillusion comes, this

expectation is replaced by a contrary 'error of pessimism,' with the result that the investments, which would in fact yield 2 per cent in conditions of full employment, are expected to yield less than nothing. … A boom is a situation in which over-optimism triumphs over a rate of interest which, in a cooler light, would be seen to be excessive." (*GT*: 321-2) He holds that investors collectively are subject to waves of irrational overoptimism and overpessimism. The former implies that they would borrow at too high an interest rate; the latter, that they would not borrow even at too low a rate. I do not accept this explanation. Keynes suggests no cause that reliably produces in investors *mass* delusions, hallucinations, hysterias, or whatever *of the same kinds*.

Livingston's (2011) proposal for dealing with the business cycle is really a doozy. When capitalism was young, he says, "increasing private investment in new plant and equipment made capital formation the engine of rapid growth. That increase in investment was funded from business profits – income withheld from consumption." (42) This is unlike today when "incentives to private investment – say, tax cuts on capital gains or corporate profits – are not only unnecessary to drive economic growth; they are also destructive. They don't lead to productive investment; instead they create tidal waves of surplus capital with no place to go except speculative bubbles that cause crises on the scale of the Great Depression and the recent catastrophe." (47) Livingston seems to argue that it is Ok to allow an expansion of fiat money credit as long as it is supplemented with high taxes on profits. For the former lowers interest rates and makes it more attractive to invest, while the latter on the contrary makes investing less worthwhile. The two effects cancel each other out, and business cycles will be ipso facto averted. I do not think that a healthy mind is capable of coming up with a scheme like that: it takes a whole nother level of folly to do so. First, this fails on its own terms: there are no profits in a boom, only investments that are aborted without bearing fruit, either goods for the consumers or profits for the entrepreneurs. Second, this is a case of treating an (admittedly serious) illness by killing the patient. The problem of course is that the two incentives are issued to different groups of entrepreneurs. Lower interest rates stimulate investment into longer projects. Higher taxes on profits deter particularly risky investments by upping the risk to reward ratio; one effect of this is to reduce the number of disequilibrating entrepreneurs competing with each other. There is no reason why for any project the two must coincide. A long project may be safe, a risky project may be short. Thus, lengthening of production processes will occur despite the second incentive, businesses based on good ideas will not be started despite the first one.

Livingston's idea resembles an attempt to use taxation to combat

price inflation. Taxing and hoarding, that is, creating a budget surplus, will diminish the velocity of circulation V, and from $P = MV / Q$, in time lower the price level P. But this simply adds the government's coercive theft onto its inflationary fraud. Keynesians look at this perversion and pronounce that the system "works." But it doesn't even from their own point of view.

The Austrian theory then takes into account neither psychology alone nor the "real" factors alone but notes that business cycles are caused by (objectively) false (subjective) expectations or objectively unrealistic subjective plans of action. In other words, we are dealing with situations of *false expectations* on the part of a sizable number of businessmen due to institutionalized deception, especially false optimistic expectations when reality is otherwise.

40. Business cycles, cont.: The bust

Recovery from the mass failure of the bust takes time. Wages must come down and new skills learned by workers, some capital goods will turn out to be economic bads which must be destroyed for a price, capital goods of varying specificity must be recovered, possibly only in part, possibly moved to a new location, possibly reordered within the new structure of production. A better economic system would never have allowed such gross misallocation of resources such that now people just have to make the best out of a great many bad things. Again, during a bust we experience an inevitable collapse of a large number of companies, far greater than the normal rate of economic attrition.

We have seen that capital is scarce, heterogeneous, complementary to each other, partially specific, and arranged in a hierarchy from the highest-order goods to the 1st-order consumer goods. Moreover, each capital good has a subjective aspect to it: what makes it a "useful" good is the fact that it participates in some firm's method of production. Capital goods are not productive in themselves; it takes a man with a plan (and ability to execute that plan) to imbue any particular item with value. An unemployed object therefore temporarily ceases to be a "good," and whether an entrepreneur will arise to repurpose it is a contingent matter. These features make reallocating capital during the bust a nontrivial problem. A corporation may have invested in a nice facade of its building, reflecting the nature of its business. If that company goes broke, that facade will be to a great extent unsalvageable. Even if another company moves into the building, it will have little use for that particular ornament. If the facade is specific enough, it may have to be torn down entirely, becoming a pure economic bad. In this sense the business cycle is tantamount to deliberate environmental pollution, turning goods into trash.

Rebuilding the production structure after a catastrophe such as an unsustainable boom is both painful and time-consuming. Nobody immediately wants the capital and labor employed by the now bankrupt firms. Trucks that were bought by some dot-com enterprises in hopes of delivering various goods directly to one's home can likely be reallocated. But the market participants are faced with a new reality. They do not even know how to price the trucks now. By how much should they lower the price? Testing the market takes time, and this time is especially long when there are mass losses and numerous people are trying to liquidate their capital and inventories at the same time. Problems abound: in finding customers for the trucks, where should their owners advertise? Cement used in the construction of houses during a housing boom will surely fall in price. Again, by how much? Who would now want it? How much would moving the cement from one location to another cost?

Thus, the marginal efficiency of numerous capital goods (or those goods' quasi-rents or their DMVP) drops precipitously to which the only remedy is for their capitalized or rental prices to fall.

It will take time for workers to lower their expectations, find new jobs, and sell their houses in order to move. Moreover, they too face uncertainty. In a depressed economy, with plenty of unemployment, which jobs are most in demand? If both real and human capital were perfectly nonspecific and like a homogeneous blob of goo, oozing with some speed from one project to the next, then their reallocation would indeed present few problems, and the bust would be a minor blip on anyone's radar. But the antecedent is, of course, false. Some labor is, or was, complementary to the capital goods now forced into idleness and hence too is temporarily useless.

Cochran (1999) poses the question, "Why if resources flow smoothly into the expanding industries as relative prices change don't the resources flow smoothly back to the original industries when the relative price change reverses itself?" (193n169) His reply is, the properties of capital. There is a chaotic muddle of an excessive number of idle things and unemployed people. The things are not prime matter, and the people have definite skills; they cannot "ooze." In addition, the expansion is *planned* by the entrepreneurs. They start new projects and bid away factors in anticipation of producing output and profits from its sale. But their bankruptcies when it becomes clear that profits will not be made are unplanned. Resources don't arrange themselves into nice factories. It is entrepreneurs who must absorb them into their companies. Capital must be employed in definite combinations, and profitably. That means that for recovery to begin, many entrepreneurs who have been largely unaffected by the slump must form plans in their minds to expand their businesses in the particular ways that utilize these

factors. This cannot happen instantaneously.

Bellante (1988) defines structural unemployment as "a geographical or occupational mismatch of workers and employment opportunities." Normally, this occurs due to shifts in consumer demand or technological improvements. But cyclical unemployment, he argues, can manifest itself precisely as structural unemployment because employment during the boom is unsustainable and contrary to the wishes of the consumers. Once production shuts down and the capital structure is broken, the mismatch will be most pointedly felt.

Recovery then is possible though slow, but in any case the misallocation of resources and waste in the boom are a done deal; what was lost cannot now be fully regained, and the cause of human progress was set back. The bad investments are irreversible in real terms, even if some goods can eventually be salvaged and repurposed. The recession will last until most factors that used to be part of unprofitable undertakings have been sustainably reallocated.

I am not saying that quick wage deflation (due to bankruptcies of firms and worker competition) and consumer goods price inflation (due to impoverishment and therefore lower demand for money) will end the depression at once. Starting new enterprises takes time, and confidence is not restored in a day. If interest rates are healthily high, then the new more time-intensive techniques that were used during the boom (pointlessly, as it turns out) will be unavailable at all during the recovery. Still, it would help.

It is immaterial whether any consumer goods were created or not. If they were, they have to be sold at a loss. This is not because there is something necessarily wrong with the products themselves but because the costs were so high. This destroys any hope for even rotation and therefore for future rounds of production. In both cases the durable capital equipment must be liquidated.

These points underscore the fact that an economy in a depression is *broken*. What broke it is the preceding boom. The economy lies in pieces, discoordinated, the factors, useless. Who is the culprit behind this devilry? I lay the blame at the feet of the central bank and fractional-reserve banking which allow credit expansions and the wide separation between the true and the false market rates of interest. These generate false optimism.

Now it may seem that there is a difference between a "normal" bust in which the errors of the boom are revealed and excessive depression due to false *pessimism*. In Roger Garrison's (2001) opinion, "a crisis of confidence can cause an economy to spiral downward to a much greater extent than was made necessary either by artificially cheap credit or by the externalization of risk" (120). Keynes provides no explanation of *false* pessimism; he attributes it more or less to bad luck,

to the waning of animal spirits, a process which is also left unexplained. Perhaps to him all pessimism is false, there is never justified reluctance to invest or extend economic activity: "The right remedy for the trade cycle," Keynes tells us, "is not to be found in abolishing booms and thus keeping us permanently in a semi-slump; but in abolishing slumps and thus keeping us permanently in a quasi-boom." (*GT*: 322) He does not know how right he is: with sound money we can have sustainable and uninterrupted secular growth simply by reason of accumulation of capital or a "quasi-boom." Perhaps a good way to understand Keynes is to think of him as society's psychologist: he recommends a perpetually cheerful attitude as most conducive to happiness. Even if one's father or dog just died, party on!

Keynes cannot just postulate a mysterious "sudden collapse in the marginal efficiency of capital." Of course a free economy prone to such random collapses cannot work, any more than a free economy plagued by wage and price rigidities. But why make these assumptions? There is a *reason* for the depression, namely, serious discoordination brought about by the preceding boom. The cure is not to boost "aggregate investment demand" but to liquidate the malinvestments and reallocate labor and salvageable capital to better and more sustainable uses consistent with the people's actual time preferences.

For Paul Davidson (2009) inflation occurs when "the economy becomes so prosperous that workers and managers believe that, in a free market, they can raise wages and prices without losing customers" (146). It is hardly possible to fail to apprehend the essence of the business cycle more spectacularly. The boom is a time not of prosperity but of the central bank laying a trap for the people to make them poor and miserable when the market crashes. The level of "wages and prices," that is, the price level, cannot be raised by arbitrary will of "workers and managers" but is conditioned by the equation of exchange. From his own Keynesian point of view, Davidson may be understood as saying that it is full employment that causes prosperity. But employment is a means to an end, namely, creating goods for the consumers. Since the investment business cycle is characterized by numerous projects that are eventually abandoned midway, full employment is beside the point. It never bears fruit. There is full-employment *poverty* or full-employment *motion toward poverty*. Davidson has not really reconciled himself to the fact that booms always implode; like Keynes he is determined to attempt to keep us in a "quasi-boom" forever.

However it is generated, with false pessimism, the government could indeed re-inflate, forcibly reversing the pessimism in which case we will be guided by the Keynesian theory. But the fact that there is really no Keynesian "bust-boom" theory but only boom-bust theories by various economic schools of thought shows that Keynes' own theory has

only limited applications. We are deep in the throes of a severe and unjustified, as far as the more enlightened minds believe, depression. We can get out of it by applying Keynesian medicine. There are, however, three problems with this scenario.

First, it is precisely the alleged "enlightened minds," the soi-disant benevolent dictators who want to run the world who got the economy into depression in the first place. One would be well advised not to trust them to make things better. The dictators' opinions about the economy are surely of little value; haven't they done enough damage already? Second, dealing with false pessimism is as far as Keynes' theory goes; it is therefore a highly special not a general theory. Otherwise, reflation will only postpone the inevitable correction and make it worse. For that reason, it is logical to consider the business cycle to consist of three and not two stages: boom, recession, and liquidation / revival, the last being the natural part of the bust's healing process but only if permitted, for the boom can be restarted and recession postponed for a little bit, only of course to return with a vengeance. Third, it is true that credit contraction and its accompanying effects can raise the interest rate above its natural level. Still, there may be no such thing as false pessimism at all if, as we'll see, pessimistic expectations can help to cure a recession. Even an abnormally high interest rate can be shock therapy for a broken economy.

When Paul Krugman (2009) asserts that despite the squandered capital during the boom, "there is no obvious reason why bad investments in the past require an actual slump in output in the present" (68), he shows only his failure to understand that the economy cannot redeploy resources to new and better uses instantly. We are not dealing with the neat supply and demand curves that shift at the economist's will but with economic reality that has rendered numerous resources seemingly worthless. Production has been curtailed and will resume only after a time-consuming purge of all illusory entrepreneurial visions and consumer caprices. No one said the reason had to be "obvious."

The mass failures entail as part of their meaning the fact that starting *new* companies is not attempted during the bust. We may attribute this to investor and consumer pessimism. This loss of confidence is not arbitrary. Objective failure can demoralize people. Further, *investor* pessimism (i.e., fear) is due to the objective conditions of the economy, namely, (a) the torn-up supply chain, (b) mismatched wages and prices, and (c) higher interest rates. *Consumer* pessimism (i.e., pain) is due to the uncertainty surrounding the workers' livelihoods which increases sharply in a bust as jobs disappear along with business firms. In addition to mass entrepreneurial failures, there are failures of those banks that loaned money to those entrepreneurs, as well. Because of their fractional reserves, the banks take an especially big hit from a

bust.

Instead of insuring deposits and bailing out failed banks, I recommend enforcing 100%-reserve requirements and keeping a distinction in the legal code between deposit and loan / investment banking. All checking accounts are to be 100% secured, and all interest-bearing accounts are to be styled explicitly as loans to the bank, of the same sort as certificates of deposit, due to the depositor only at a definite later date.[29] See Fisher (1936) for detailed proposals of how a transition can be accomplished. For example, it is not necessary to prohibit commercial banks from investing and investment banks from accepting deposits, all that is necessary for the financial health of society is to enforce the relevant property rights of all parties and for all transactions.

41. That a business cycle can be due to (1) moral hazards in banking and (2) changes in government policy but *not* (3) sheer bad luck

The first premise of the first theory is that banks are protected from collapse or bankruptcy by the Fed as the lender of last resort. Further, many depositors do not punish badly run banks because they feel covered by the Federal Deposit Insurance Corporation. For example, depositors will seek out the highest interest rate without worrying whether the bank offering it is also investing their money into high-risk ventures. These generate a moral hazard by making the dream of every businessman – capitalist profits and socialized losses – come true. This system is hardly laissez faire, even though pundits of every stripe fail to realize that and blame capitalism for interventionist perversions. Just as under socialism nobody knows how to produce anything in an economic way, so with this moral hazard there will be economic hustle and bustle, but it will be constantly frustrated, and the excessive entrepreneurial errors will result in impoverishment even under the guise of frenetic activity. There will be a perpetual boom during which society is getting poorer.

Given their privileged status, greater risks are taken by the banks than would be sanctioned by normal prudence. Profits can appear from lengthening the structure of production as much as from a new technology. Thus, if there are profits to be made, then that is where one invests. Unfortunately, the risk is out of all proportion with the reward, so plenty of investments will be made that would be shunned in a more responsible industry. This will create a cluster of errors in the early stages of the production structure.

Cassidy (2009) recognizes interventionism as "the worst of all worlds: a financial system dominated by a handful of firms that are 'too big to fail,' but that can take on as much risk as they please, secure in the knowledge that if things go wrong the taxpayer will be there to bail them out. Such an arrangement would amount to crony capitalism writ large…" (346). Cassidy's mistake is taking interventionism to be "free market." He does not realize that the government in a devious plot with the banks has captured one of the commanding heights of society, namely, creation and evolution of money, and that the entire financial system revolves around a state-controlled monetary regime. He points out, reasonably enough, that, "although operationally independent, the Fed is really just another branch of the federal government" (320). But he still considers the financial industry to be "free-market" which again and again "fails" which allegedly proves that the defenders of the market practice "utopian economics."

Lovers of freedom understand that interventionism is an internally inconsistent, self-contradictory system. This Misesian point must be rightly understood. It has been objected that the dominant form of economic organization today is interventionism which shows no signs of disappearing or collapsing on itself. This objection misconstrues the insight.

Mises (1996) points out: "There are two different kinds of social cooperation: cooperation by virtue of contract and coordination, and cooperation by virtue of command and subordination or hegemony." (195) To paraphrase Ayn Rand, anyone who cannot tell the difference between these two, "deserves to find out." The person on the receiving end of the hegemonic bond still decides whether to obey or to rebel. But having chosen to obey, he is no longer an acting man. He is a pawn, a thing used according to the designs of the hegemon. Under capitalism a man enters into new contracts every day of his life, thus making continuous use of his freedom, often in novel ways. A subordinate under a totalitarian regime chooses once and stops choosing thereupon. If we define economics as the science of the fact that human beings choose, then economics has little to instruct us regarding the conduct of the vast majority of people under socialism. Interventionism, however, poses its own set of problems. To what extent are minimum wage laws, say, hegemonic? Suppose the government tells Smith: "You are to employ Jones for $10 / hour. You will lose money, but if you disobey, then we will shoot you." This is clearly a working out of a hegemonic relationship between the state and Smith. But let the government say instead: "If you, Smith, are to employ anybody – and you do not have to – then you must pay them at least $10 / hour." Smith is still not in full control of his business, but the hegemony is less pronounced. Smith has the freedom to choose whether to employ Jones in the first place. The

semi-free economy is marked on the one hand by efforts of the state to cut off avenues of human action that it considers antisocial and on the other hand by individuals – as long as full socialism is not yet established – finding escapes from government decrees through "loopholes" inevitably left open. If there are *degrees* of coercion and different *ways* of coercing, then the hallmark of interventionism is unintended consequences. As a result, "interference produces results contrary to its purpose, … it makes conditions worse, not better, *from the point of view of the government and those backing its interference*" (764). The state is softer on the people than under full-blown socialism, and it is this indecisive "weakness" – the champions of interventionism rarely have the stomach for the requisite brutality to carry their programs to their logical nadir – that results in the unique dynamics of the mixed economy.

Mises does not mean that an interventionist society like the U.S. cannot exist for an indefinite period of time. He does not mean even that the most absurd regimes like the Soviet Union are bound to fall apart in the short term, though he considers it likely: "The chiliastic empires of dictators are doomed to failure; they have never lasted longer than a few years. We have just witnessed the breakdown of several of such 'millennial' orders. Those remaining will hardly fare better." (153) The paradoxes and inconsistencies of interventionism are logical first and practical only second. That legal regime *A* is better than regime *B* does not entail that people must of necessity substitute *A* for *B*. It does not even entail that 20,000 years from now or after however long *A* will finally prevail. "Neither a low standard of living nor progressive impoverishment automatically liquidates an economic system. It gives way to a more efficient system only if people themselves are intelligent enough to comprehend the advantages such a change might bring them." (860) A person can live his whole life facing severe inner turmoil in his feelings, thoughts, and actions without either resolving those problems and achieving "inner peace" or allowing them to destroy his life for good. A society can similarly twist slowly in the wind for centuries without discovering either the wheel and carriage or the utility of economic freedom. Instead, if a person took economics seriously as an intellectual discipline, steadied his mind as if logic were a martial art, and tried to work out how to achieve the greatest prosperity for the greatest number, even of himself and his children in the long run, then he would be forced by the power of his own pure reason to decide in favor of laissez faire.

In what sense is freedom "indivisible"? Surely, the government can tax *X* and leave *Y* untaxed. Also, I may allow Smith to borrow my pen and use it but require him to be careful with it and return it, thus partitioning the bundle of rights to the pen however I please. That Smith

is free to use the pen in one way does not prevent him from being restricted in its use and obligated to me in other ways. That freedom is indivisible must also be rightly understood. If principle *A* justifies policy *B*, and *B* is evaluated as bad or inappropriate, then *A* must be false or at least insufficient. But in obedience to its nature as a general rule, *A* likely justifies not only the particular *B* but also numerous other freedoms and practices. And if *A* is no good, then those freedoms, etc. are undefended and may well no longer be reasonable. Thus, not only *B* but also *C*, *D*, *E*, and all the rest of the ideas and institutions that *A* legitimizes fall, too.

Thus, Mises argues that consumer sovereignty (*A*) rules out drug prohibition (*B* – i.e., drug liberty). But insisting on $\sim B$ entails that "government derives its authority from God and is entrusted by Providence to act as the guardian of the ignorant and stupid populace" ($\sim A$) (733). But if that is so, surely there can be no objections to censorship or gun control or in general any policy that protects people "from themselves" for "their own good" ($\sim C$, $\sim D$, $\sim E$).

The real *intellectual* choice then is between pure laissez faire under which (1) the government does not manage the money supply and (2) commercial banks are honest, and pure socialism. Cassidy rejects socialism, hence he must logically embrace laissez faire which I believe he would do if only he understood that it is the exasperating government meddling that failed not the markets.

Now if someone expects another to pay for his mistakes, then the harmony of interests between that market actor, such as an individual or firm or in this case banks, and society vanishes. The pursuit of private profit no longer jibes with the common good. Therefore, banks are regulated by law in order not to permit their moral hazards, i.e., incentives to reckless behavior, to lead them to ruin and cause society to pick up the tab. Unfortunately, that means that there must exist detailed and minute rules for numerous transactions contemplated by the banks. Someone has to determine whether a given deal is "reckless" or "reasonable," and if the banks are not trusted with this task (since the cost of making mistakes to them is reduced), then the government must take over. But the government is not competent to allocate capital and decide which persons or organizations ought to get how big a line of credit with which bank. By regulating business decisions, the state has turned private entrepreneurial firms, i.e., commercial banks, into quasi-bureaus. The greater the extent of moral hazard, the greater the scope for regulation until the legislature comes to be fully in charge of lending and banks have been effectively nationalized.

It seems to me that the cycle due to poor banking incentives will occur when there is a *change* in the policy creating the hazard. In the particular case of the recent depressions, the change was the so-called

"deregulation" of the financial industry engineered between 1970s and 90s. Nonbank financial institutions were permitted to offer close substitutes for the traditional bank products, and banks were in turn partially liberated to be able to compete against these upstarts. It has become apparent that some banks even want to go back to the old days when they did not have such dangerous competitors. This reveals yet another side of regulation which is that government red tape distorts the marketplace. The cost of complying with the rules is higher for some companies and lower for others, generating a competitive advantage for the latter. It is usually naive to imagine regulation to be in the interest of the common good; in many situations it is a weapon wielded by the market leaders to clamp down on existing competitors and deter potential newcomers into the industry from even trying their skill. Thus, e.g., the innovations in credit instruments and the testing of these innovations in the loan markets by banks were to be cheered rather than derided as "too complex" or "too risky." Indeed, they were both, but that is the fault of interventionism not of the pioneers. The *idea* of deregulation was wonderful, but its *execution* was not up to par.

Let me give an analogy to the situation by looking at the state of American health care. The medical industry is hamstrung on numerous fronts. I will mention just a few: (1) one-size-fits-all government licensure; (2) restrictions on the number and kinds of medical schools; (3) price fixing by the American Medical Association; (4) patent monopolies for drugs; (5) lack of a functional market in individual health insurance; (6) insurance that pays even for routine procedures; (7) insurance that pays for illnesses whose outbreak is under the control of the insured; (8) employer-provided insurance; (9) Medicare and Medicaid "welfare." We do *not* have a free market in health care today. For example, with regard to (1), a medical license is not an indication of quality. For some branches of medicine it is too stringent, cutting off the supply of decent doctors whose competition would lower prices. For others it is too lax, lulling the consumers into a false sense of security. Practitioners of alternative medicines are marginalized and persecuted if they become too bold. All licensure must be immediately privatized, as it is in, say, the computer and software industry: many computer companies, such as Microsoft, Sun, and Cisco, offer numerous private certifications of widely varying difficulty that individuals can acquire to enhance their reputation and therefore chances of being hired and their salary. We need the same kind of system in health care. I expect that doctors will apply to the most restrictive (private) accreditation board whose tests and training regimen they can withstand. Under free market the fear that "we" must "control costs" would disappear altogether. For it is the *consumers* who control costs by refusing to buy when they deem prices to be too high. Patients would balance quality and price as they

do in every other market every day.

It is true that alleviation of pain and avoidance of death, unlike pleasures like a candy bar, usually bring high consumer surpluses or gains from trade at "reasonable" prices. Even if candy makers could restrict competition and enjoy monopoly profits for an extended period of time, their exploitation of the consumers would hardly be extensive. On the other hand, the demand for relief from agony and for staying alive is both high and inelastic which means that restriction of competition would be lucrative for doctors. This is exactly what has happened. The government, having blithely sanctioned the anticompetitive practices, responded to the public's clamor for "something to be done" in the face of high prices by having the taxpayers foot the bill for health care. But this of course has not only unjustly looted us for the sake of the corrupt medical men but also increased the demand for medical services, raising prices even higher. In other words, we have done and continue to be doing the exact opposite of what we really want on both the supply and demand sides of the equation.

Now just as a single vice can ruin one's happiness, so even a single intervention can not only distort the workings of the market to such an extent as to make it very inefficient but also generate a case for further interventions. In other words, there is a dynamic in the system such that the initial intervention produces results contrary to the common good and to the publicly stated aims of its very supporters; people are displeased and threaten to vote the regime out of office; and the result is either a repeal of the intervention and a return to the unhampered market or passage of further interventionist legislation. Therefore, interventionism, the alleged "third way" between capitalism and socialism is *internally inconsistent*. Think of it this way: when one is healthy he does not suffer, and when one is dead he does not suffer. One suffers only when he is alive and sick. Pure or laissez-faire capitalism, in medicine or any other business, is being healthy; socialism is being dead; and interventionism is being sick in which case one may want either to convalesce or to die. Socialists seek to convince the people that the cure for their woes is suicide.

Interventionism is sustained by means of a three-pronged attack on what is good and true by the state, special interest groups, and incorrect ideas. Thus, criticizing the state, Mises (1996) agreed that "for ambitious kings and generalissimos the very existence of a sphere of the individuals' lives not subject to regimentation is a challenge. Princes, governors, and generals are never spontaneously liberal." But added that "they become liberal… when forced to by the citizens" (324). Criticizing private business, he pointed out that "the nineteenth-century success of free trade ideas was effected by the theories of classical economics. The

prestige of these ideas was so great that those whose selfish class interests they hurt could not hinder their endorsements by public opinion and their realization by legislative measures." (83) It is precisely interventionism, not free market, that represents the triumph of private interest over the common good. And criticizing bad ideologies, he countered: "If modern civilization were unable to defend itself against the attacks of hirelings, then it could not, in any case, remain in existence much longer." (1985: 153)

Schumpeter (2008) even argues that an important source of socialism's allegedly greater efficiency as compared with capitalism is the absence of a vast network of legislation that interferes with business and of the cost of private enterprise's complying with and resisting these interventions, particularly by employing a horde of lawyers. "But not inconsiderable is the social loss from such unproductive employment of many of the best brains." (198) Schumpeter had apparently despaired of the possibility that the problem of interventionism can be resolved by going the other way, namely, toward laissez faire by means of the working out of the right ideology. Schumpeter must have liked the army-like "simplicity" of socialism: orders are given, and they are obeyed. Those who disobey are cleanly disposed of in concentration camps or are starved to death. For example, there is no "administrative apparatus" that "does nothing but struggle with the bourgeoisie for every dollar of its revenue" (198). There is no struggle between the individual and the state because the state has won decisively. Men are now little more than tools and machines used by the central planner as he sees fit. Schumpeter saw distinct gains to society from this peace of the grave toward which in medicine, as of this writing, we appear to be heading; politics, he avers, "would be purified" (302).

The analogy to the banking system is that "deregulation" preserved the affronting state of interventionism into the free market. It brought the patient back to life but kept him sick. How can an industry plagued by the inherent fractional-reserve fraud, the central bank's available round-the-clock printing press, the preposterous "insurance" of some deposits, legal tender decrees which trigger Gresham's law, central planning of the monetary and fiscal policies be considered "free market" or "deregulated"? One obvious consequence is incentives to banks to excessive risk taking and therefore poor use of capital. The free market is not just liberty, it is also strict adherence to the *ethics* of liberty, specifically steadfast respect for everyone's private property rights.

Of some interest is the financial innovation called "credit default swaps" (CDS) pioneered by J.P. Morgan. Cassidy (2009) relates that this involved securitization of loans "with a twist. The investors – insurance companies and other banks, mainly – didn't get to own the loans, which remained on Morgan's books; they merely agreed to take on the risk of

Morgan's borrowers defaulting. In return, Morgan agreed to pay them what were effectively insurance premiums. As long as the borrowers kept making their interest and principal payments, the investors would receive a steady stream of income… But if some of the borrowers defaulted, the owners of the [special-purpose vehicle] stood to make up the full value of the loans." (280) Cassidy quotes one of inventors of CDS saying ecstatically: "For the first time in history, banks would be able to make loans without carrying all, or perhaps even any, of the risk involved themselves." Now the CDS scheme is economically absurd. Rothbard recognized that decades ago, arguing in an interview:

> You cannot insure entrepreneurs because they engage in uninsurable risk. You can reasonably predict how many fires there will be in New York; the unlucky few who get burned can dip into the pool of resources. But entrepreneurship is heterogeneous; it is completely unpredictable, and each attempt is nonrandom. The entrepreneur assumes the risk. If an insurance company insures it, it becomes the entrepreneur. Who then insures the insurer? In the case of banks, either they don't need insurance, since they are 100% covered, or they are uninsurable because they are taking entrepreneurial risk. (1990)

It should have been obvious to the CDS investors that they were creating an outrageous moral hazard by insuring the banks: what incentives did the latter have not to fail? The investors took over the all-pervasive threat to J.P. Morgan from future uncertainty and from the actions of its competitors but did not end up running the banks. For investors "the promise of receiving cash without locking up capital is extremely attractive: with the economy humming, and credit defaults at historic lows, it proved irresistible," Cassidy continues (282). Skidelsky (2010) too very properly finds fault with insuring "every type of risk… We talk of 'political risk' when we should be talking about political uncertainty. We simply do not know what the probability is of future direction of Russia's economic or political policy." (41-2) In fact, numerical probabilities cannot even be assigned to such events. The CDS affair was bound to collapse most readily and energetically as soon as the bubble burst. It is stunning how the corrupt government-induced boom was able to take away people's sanity even in matters regulated by economic logic itself.

The ingenious second theory is found in Garrison (2001) who notes that the government pursues a variety of borrowing schemes to run a deficit but not all at the same time. An unpredictable switch from monetizing debt with the help of the Fed (which leads to inflation) to borrowing from domestic savers (which raises interest rates) can quickly annihilate the profits of the companies engaged in work on longer

production projects. Adds Garrison: "Long-term, or capital-intensive, undertakings are inherently more risky than short-term undertakings precisely because more time must elapse before such undertakings can prove their profitability – more time that increases the likelihood of some major change in deficit accommodation or some attempt at deficit reduction that can turn expected profits into losses." (119) Once again the intertemporal structure of production is shown to be valuable in understanding business cycles.

Another and this time false theory is proposed by the law-and-economics maven Richard Posner (2009) whose book is tendentiously entitled *A Failure of Capitalism*. According to him, even prudent investing can result in a depression. He writes: "events that are catastrophic to a corporation if they occur but are highly unlikely to occur, and therefore, if they do occur are likely to occur in the distant future, will not influence the corporation's behavior. A bankruptcy is not the end of the world for a company's executives, or even for its shareholders if they have a diversified portfolio of stocks and other assets. But a cascade of bank bankruptcies can be a disaster for a nation." (28) Why would the cascade take place? Posner accepts the idea that "asymmetric schemes in which compensation tied to stock value is combined with a generous severance package may be in investors' interest [because they encourage the executives to take risks]. But such schemes may not be in the interest of the nation as a whole if they enhance the risk of a depression – and they do." (97-8) Has our author never heard of the invisible hand? Why do individually profitable decisions lead to group misery? And are not the shareholders with their "diversified portfolios" part of the nation? Posner provides a hint by saying that "financial catastrophes… tend to be rare events" (99). My understanding is that he attributes business cycles to sheer bad luck. A vast number of individually prudent decisions turn out to be, for reasons unknown, horribly bad. But this is implausible. Each company is in its own unique situation and does not depend on everyone else so completely that if one company goes belly up, then a "cascade" is automatically triggered. If my supplier goes broke, then I will have to find a new, perhaps a more expensive, one, but that event does not necessarily entail a loss to me. A random coincidence of bad luck so tremendous that it causes a global depression is so unlikely as to be entirely irrelevant to a phenomenon that repeats itself with remarkable regularity. Posner praises Irving Fisher for his business cycle theory but shows no awareness of Fisher's remedy for it which he proposes in his *100% Money*.

The Austrian business cycle theory (ABCT henceforth) herein defended and the first two theories described in this chapter provide *reasons* for the mass failures. Posner's theory does not, and that is why it

is uninteresting.

42. That hoarding in not uneconomic

Keynes' reasoning appears to be something like the following: preference for liquidity, i.e., demand for cash balances as a store of value, causes fewer exchanges to be made. Trade is thereby hindered, and people find each other less useful. Ultimately, the "liquidity fetish" makes social cooperation less intense and less valuable for all or most members of society.

Consider a Crusoe-Friday economy in which both men grow apples and oranges. They could each produce for themselves. Or they could specialize and trade which, according to the law of comparative advantage, would increase the total fruits of their labor. If Crusoe, however, perversely hoards his apples and refuses to exchange them, then the system breaks down, and both are seemingly poorer. The ideal solution (now in the real economy) must be feverish economic activity, living from paycheck to paycheck, spending and investing the entirety of one's income immediately upon receiving it. And then there is the multiplier, electrifying the economic hustle and bustle still more. I must protest, however, that it is individual preferences that dictate whether one will or will not exchange his goods. What is required for an exchange to take place is mutual consent. Only thus will the utilitarianism of welfare economics be served. Moreover, Keynes' worry proves too much: if refusal to trade is now evil, then must we outlaw vacations and mandate 80-hour workweeks?

To summarize what we have already discussed with respect to money as a store of value: (1) hoards in the "wide" sense of the term, simply as cash balances, are unavoidable because for all units of money it is the case that each unit is at every moment in time owned by someone. (2) Hoards in the "narrow" sense of the term have utility as a source of security, and the amount of money hoarded by each individual is a function of his risk preference. A particular amount of money in one's possession is a hoard in the narrow sense if its purpose is to protect its owner from unforeseen and unplanned for future events. Hoards have utility to the hoarder as a de facto claim on society; money has the unique potential to be exchanged at any moment for a vast variety of goods. (3) Hoards in the narrow sense also have social utility, in that they increase the purchasing power of the non-hoarded money held by other people. (If $P = MV / Q$, then lower V also lowers the price level.) It is true of course that if everyone were to dishoard at the same time, then this social utility would come to a swift end: everyone would scramble to buy, and there would be initial shortages until prices adjusted upward and diminished the usefulness of everyone's savings as

a store of value. But such an event is surely implausible.

It may be argued that hoarding does not encourage production. Well, neither do walks in the park. So what? Hoarding does not deserve its infamy. Hoarding signals that the hoarder wants to spend less, but the market still clears as prices fall. Keynes puts his opinion on this matter this way:

> An act of individual saving means – so to speak – a decision not to have dinner today. But it does not necessitate a decision to have dinner or to buy a pair of boots a week hence or a year hence or to consume any specified thing at any specified date. Thus it depresses the business of preparing today's dinner without stimulating the business of making ready for some future act of consumption. (*GT*: 210)

Suppose Smith switches his consumption from pork to beef. The revenues of the pork companies decline. The pork producers might want to lower their workers' wages, but they cannot do so since if they lower Jones' wage, then he will leave to work for a beef factory which is looking to expand because of the higher demand and is thus offering higher wages. They'll have to lay Jones off. The result will be (1) that Jones will be reallocated from pork to beef production and (2) a *relative* change in the equilibrium prices and quantities of pork and beef. Suppose now that instead Smith increases his demand for money and decides to spend less on pork without spending more on beef or anything else. Then Jones will not be reallocated since all the resources in all the other industries are fully employed, there is no room for him there. Instead, his wages will be lowered. This will reduce his income and cause him to spend less on, say, shoes. (Jones need not spend less on pork, if he consumes it, because its price has already fallen. He may also consume more of inferior goods, but that does not change the substance of the argument.) This means that some Robinson working in the shoe business will in turn have his wages lowered. Which reduces *his* demand, etc. We can see that the decision of a single man, Smith, to demand a higher cash balance eventually causes the entire *absolute* world wage / price level to drop. This may seem like quite a momentous consequence of something so insignificant, but it happens as a matter of course. Individual risk preferences can be satisfied without producing any "involuntary unemployment."

The decrease in the velocity of circulation of money and of the price level is a consequence of Smith's valuing money as compared to goods more than before. Both relative and absolute price changes are then actuated by changing individual preferences: the former from one nonmoney good to another, the latter from nonmoney goods to money.

If we keep Smith's time preferences constant, then his newly

hoarded money will come from both his consumption and investment in proportional measure. The production structure will deflate in money terms but remain unchanged physically, except insofar as the monetary adjustments are mingled with real human actions in mysterious and unpredictable ways. (Uncertainty is a cruel mistress.)[30] The rate of interest will also be unaffected in the long run.

How would a businessman *know* whether the fall in the demand for his product is due to a higher demand for his competitors' products or to a higher demand for money? In both cases he must lower prices (as the demand curve shifts to the left), but in the first case he should lay people off and lower quantity supplied, while in the second case he should lower wages and keep the same quantity (as the supply curve shifts to the right). This can be a tricky decision, but in the end one of many that each entrepreneur faces every day. If in this process a businessman makes a mistake and reduces quantity, this will concomitantly reduce velocity (as the newly unemployed workers curtail their spending) and preserve the disequilibrium. As with all types of equilibrating, the success of the free market depends on entrepreneurs being for the most part correct. But there are incentives to get it right, and that is enough.

If many entrepreneurs mistake the increase in the demand for money for decrease in the real demand for their goods, workers will be reallocated from firms whose selling prices fall first toward first, job search activity and second, firms whose selling prices fall last *and then back*. This is wasteful and a pain in the neck but inevitable given the assumption of entrepreneurial errors. Even in this case there is "malemployment" not involuntary unemployment.

The paradox of thrift makes some sense if by saving we mean *hoarding*. Then higher demand for money will indeed reduce money incomes and cause people to save, by which we now mean abstain from consumption and *invest*, less. But hoarding does not defeat itself because it will eventually deflate all prices within the production structure. Keynes neglected this elementary effect. Littleboy (1990) interprets Keynes that lower wages will increase employment only temporarily. "If the marginal propensity to consume is less than unity, the newly employed workers will not consume all of the additional output. To prevent the accumulation of commodity inventories, producers will need to make unanticipated price reductions, thereby incurring losses. These losses will induce the curtailment of the flow of output until the initial level of employment is restored." (78) The workers will hoard some of their new income then. The alleged psychological law that claims that this must be so is, as we have seen, null and void. But even if hoarding occurred, it would only result in the diminution of the absolute wage-price level. Once the relative wages and prices are in equilibrium, full

employment will be preserved.

William Hutt (1979) praises Michael Polanyi's "delightful, lucid, yet independent popularization of Keynesianism" (89), though of course Hutt disagrees with him. Polanyi (1948) suggests that his views are "common sense" which "can be understood in an hour or two by any person of normal intelligence" (ix), but they seem rather to be mere man-in-the-street economics. It may be faithful to Keynes to some extent. Not enough money "circulating" in the "money belt" between "homes" in "businesses," we are told, leads to a depression; too much money, to inflation; but just the right amount, to full employment. Government, according to Polanyi's political philosophy, is a "guardian of the level of monetary circulation" (37), pumping in new money to offset private hoarding and taxing to counter inflation and depress booms brought about by dishoarding. But of course if prices are flexible and free to adjust, changes in the demand for money have no effect on employment. If prices are frozen (downward), not only it is not a market economy at all, but no amount of monetary manipulation will ultimately help matters.

Polanyi then seeks to stabilize MV or the price level (given Q) by increasing the supply of money by the state in response to an increase in the demand for money by the people. This is not entirely in vain. If hoarding by Smith at one point in the economy is matched by dishoarding by Jones at another, there need not be a general price deflation, merely as we have seen a reallocation of some resources from producing the goods that used to be demanded by Smith toward the goods experiencing higher demand from Jones. The same easy solution succeeds if higher demand by government in possession of the newly printed money is substituted for Jones' demand. In the first place, prices still need to be flexible for this to work. The "inflation" and "deflation" will not simply neutralize each other and will not spare the economy the need to adjust. Second, this works best under pure commodity money. This is because higher demand for money will increase the quantity supplied of money as both the output of and employment in the gold mining industry are stimulated. The demand for and supply of money will be balanced "automatically" and efficiently. The argument then is that it's fine when prices change due to economic progress.[31] But the kind of massive blanket adjustment that is caused by trivial monetary shenanigans seems singularly pointless. It's a ton of work for the market to do for no good reason. This is where hard money alleviates the problem. Money is a special commodity in the sense that any supply of it is as good for facilitating transactions as any other supply. It seems therefore that gold mining is a waste. And it's true that under ideal circumstances, such as perfectly flexible prices, price deflation is unproblematic. But to the extent that such a global adaptation may be

frustrated by market imperfections like sticky wages, or take an excessive amount of time, or suffer from significant transaction costs, the gold standard saves the day.[32]

This is yet another reason why fractional-reserve banking is socially vicious: as its result, the money supply constantly fluctuates, sometimes increasing, other times decreasing, often by substantial magnitudes. This keeps the market under constant, and unnecessary, pressure to modify the price level.

Regarding the gold mining industry, whatever profits a mining firm generates (like gold coins that are minted from gold dust) will be more valuable to its owner. Unlike the wages of everyone else, the money wages of workers in the mining industry will not fall (due to lower demand for goods in terms of money since they are manufacturing money itself). So the owners of mining companies will be paying their workers in more valuable money, too. However, the owners will be able to lower wages eventually because all alternate occupations now pay less, so the mining workers have nowhere to go. That of course will attract other entrepreneurs into the industry. But on the other hand the *capital goods* used in mining will, like everything else, go down in price. If I'm a solitary gold digger, I'll want to invest more of my own labor if the payoff is higher. So within a firm workers will be willing to work overtime, finding more gold and getting paid more (in the same gold). And new workers will want to get hired for the same reason. Hence there will be an expansion.

Gold money will also somewhat stabilize the interest rate because whatever savings were taken out of the loan market due to hoarding will be injected back into it by gold miners if time preferences are unchanged. It would seem that fractional-reserve banking (FRB) can also serve the same purpose. Suppose that increased demand for money manifests itself in part in a greater amount of demand deposits relative to time deposits in FR banks. Then the banks will still loan out some or most of the demand deposits, increasing the money supply and preserving the same interest rate. In fact, this will occur immediately without any complex interactions between prices, gold output, and the supply of and demand for loanable funds. (See Selgin 1996.) Unfortunately, FR banks cannot discriminate between changing risk preferences and changing time preferences. Both can involve conversion of time deposits into demand deposits, the former for hoarding, the latter for consumption. In both cases interest rates will stay the same, and this is fine for hoarding but bad for increased consumption which should *raise* interest rates. Second, this assumes that the situation of "credit being expanded to the max" can persist indefinitely. Instead, FRB does not work and as we have seen generates the boom-bust cycle with its endless series of inflationary credit expansions and deflationary

credit contractions. Mere free banking therefore will not be stabilizing.

Only once in his book does Polanyi acknowledge that "wages must… remain limited by the productivity of labor" (145), but he objects to each worker getting the exact fruits of his labor on the grounds that it would be contrary to "social justice." He does not explain why that is, nor how inflation would satisfy social justice. He himself argues that the goal of full employment is fully separate from "the issues of social security, equality, efficiency, and all the rest of them" (136). Why not separate it from "justice," too?

It is certainly true that if the public's desire for greater hoards is unanticipated by entrepreneurs, then some entrepreneurs will have to sell some of their goods below cost, losing money in the process. But since increases in hoarding that have a noticeable effect on the economy occur only in depressions, a failure to foresee such an increase is merely a corollary of the failure, entirely unsurprising, to foresee the bust. Abolish the business cycle by means of hard money, and we abolish the deleterious effects of hoarding if indeed any such there be. The only question is whether hoarding has the power to aggravate a depression. It is also true that hoarders stand ready to take goods off the market at their pleasure, but they relinquished other goods in the past to the consumers. Nothing either uneconomic or unjust is going on.

Thus, people hoard money in order to deal successfully with surprises both in their capacity as consumers and in their capacity as producers. With respect to surprises in investing, Keynes believes that this problem can have a much better solution than for people to demand to hold cash balances to a greater extent. "Investment based on genuine long-term expectations is so difficult today as to be scarcely practicable" for private investors, he writes. (*GT*: 157) His startling prescription is to outlaw competition. In his ideal society, the government takes over most of the investment activities. Precisely because it will not need to deal with unpredictable actions of other businessmen which are directly responsible for the very phenomenon of future uncertainty, the state can plan and work alone without encountering needless contingencies and surprises. Schumpeter (2008), who should have known better, concurs:

> One of the most important difficulties of running a business – the difficulty which absorbs most of the energy of a successful business leader – consists in the uncertainties surrounding every decision. A very important class of these consists in turn in the uncertainties about the reaction of one's actual and potential competitors and about how general business situations are going to shape. Although other classes of uncertainties would no doubt persist in a socialist commonwealth, these two can reasonably be expected to vanish almost completely. (186)

> In the [capitalist economy] endless moves and countermoves are necessary and decisions have to be taken in an atmosphere of uncertainty that blunts the edge of action, whereas that strategy and uncertainty would be absent from the [socialist economy]. (194)

Neither Schumpeter nor Keynes understood the theorem of the impossibility of socialist computation. E.g., Schumpeter writes that "consumers in evaluating… consumers' goods ipso facto also evaluate the means of production which enter into the production of those goods" (175). Mises (1996) retorts that it is "hardly possible to construe the market process in a more erroneous way" (357). Surely, the consumers do not *determine* the prices of the factors of production but merely *affect* them and only *via the intermediation of entrepreneurs* who both demand and supply those factors. Consumer spending is sandwiched between disequilibrating and equilibrating entrepreneurship; the former predicts it; the latter reacts to it; both shape the prices of the factors. Without market prices for those factors of production, the state most certainly *cannot* calculate in the sense of determining when its actions did and when they did not increase consumer happiness the greatest. Aleatory actions and the possibility of entrepreneurial loss can be eliminated only along with the possibility of victory.

The state can try to plan and act alone, treating the citizens as inert resources without a will of their own to be moved to and fro, but with no one to compare its actions with, it ends up groping blindly in the dark.

Murray Glickman writes that "the Post Keynesian critique of the notion that market economies have an automatic tendency towards full-employment equilibrium is based on a denial of the neutrality of money" (King 2003: 369). But we can see that this tendency is compatible with non-neutrality of money. Hoarding, or liquidity preference, poses no challenge to the free market.

43. That a recession can be recovered from naturally

Keynesians fear that any recession would be characterized by falling wages and prices such that both consumption and investment decline. There is an interplay of three factors which I want to bring attention to that determine the time span of the bust and extent of the deflation.

First, which I will call the "objective" factor, is that just as during the boom too many entrepreneurs were fighting for the same resources,

so now in the bust there are too *few* entrepreneurs, and the demand for the factors of production has slackened, lowering their income and level of employment. The economy is in shambles. The factors will again become embroiled in some businessmen's production endeavors only when their prices fall.

Second, and let me call it the "subjective" factor, is security-seeking. If I see factors around me becoming unemployed, then I will worry about my own solvency and increase hoarding. Hoarding restricts both consumption and investment, thus it can raise interest rates insofar as it restricts the supply of loanable funds, another reason why it hastens recovery. Hoarding itself is undertaken when the risk of losing one's job or business is believed to have increased. But security, like every other good, is subject to diminishing returns. An extra gold ounce of security brings less happiness the more security one already enjoys. At the same time, the disutility felt from reallocating a marginal dollar from consumption and investment toward hoarding increases. Therefore, the deflationary spiral will go on until enough security has been attained by the public.

Remember that expected profits are discounted not only by the rate of (a) interest (or time preference) and (b) inflation but also by (c) the rate of fear (or risk preference). Low confidence entails high fear discount. Hence, the "liquidity trap": even low interest rates maintained in a recession by the central bank may be unable to restart the boom if people are fearful. The cause of this fear is, as just stated, both *objective* due to major discoordination and factor owners' unrealistic wage and price expectations, and *subjective* due to the public's anxiety from seeing the world crash and burn around them.

Keynes is condemning both consumers for their "capitulation," to use a term from an article by Paul Krugman (2008), a Keynesian if there ever was one (for Krugman, "*General Theory* is nothing less than an epic journey out of intellectual darkness"), and entrepreneurs for their cowardice. This aspect of Keynes' thought goes beyond economics and concerns the fundamental properties of human nature. Now the human appetite is divided into unconscious and conscious; the latter in turn into sensual and intellectual; and the sensual appetite, called "passions," is further subdivided into concupiscible and irascible. The concupiscible passions are sensations, like touch and taste, that are instinctively attracted to pleasure (as opposed to intellectual joy) and flee from pain; the irascible passions are those aggressive and defensive habits and virtues, such as daring, tactical prowess, fast reflexes, courage, perseverance, with which a man resists dangers and achieves his goals. At the beginning of a bust, consumers (who correspond to the concupiscible part of the soul), Keynes alleges, have stopped seeking their own happiness. They are somehow paralyzed with pain. On their

part, entrepreneurs (who correspond to the irascible part) are running scared; they have ceased to be cunning and bold, pursuing their profit and victories with fierce and ruthless determination.

Consumer pain and entrepreneurial fear then both mark a recession. How can one start a new business when the production structure is in disarray, and the present basis for judgments of what the consumers would want in the future is compromised? In a normal situation, most of the economy evenly rotates, with changes to business practices happening on the margins. If the business atmosphere is pessimistic, fewer new businesses will be started; if optimistic, more. But the core economy will still chug along sprightly. It is only in a recession that pessimism can have an effect on employment. On the one hand, there is credit contraction from the liquidation of unviable businesses or unpayable mortgages. On the other hand, both banks and entrepreneurs fear, so both supply of and demand for *new* loans fall, and quantity loaned diminishes. These deflate the money supply. Finally, consumers may hoard, slowing down the velocity. Price deflation ensues. If wages are less than fully flexible, then businesses may lay off workers which again decreases velocity (though its effect on P can be offset by lower Q). Following Hayek, we can call this *secondary deflation* which affects the absolute price level, whereas the primary deflation is the relative drop in the prices of previously overvalued capital and labor. It need not be a pleasant development, e.g., it hurts the remaining sound businesses by causing both persistent mispricing and an increase in the real value of debts. But what overcomes the demoralization of the businessmen is the restoration of the production structure to reflect the wishes of the consumers. (These wishes may differ from what they were before the boom.) This possibility is signaled by the rise in the interest rate, even if it temporarily rises above the natural rate (such as if the supply of credit drops by more than the demand), an event that can boost business confidence. We have seen that credit expansion has two effects: it (1) lowers the rate of interest and (2) inflates the money supply. The rising of the interest rate eventually busts the economy; the credit contraction and deflation that accompany this aggravate the depression. The cure for both diseases is the same: sound money and 100%-reserve banking. If, however, the first illness is allowed to happen, the second one can be treated with some form of reflation to restore the money flow. The problem with such a treatment is that the dependence of the money supply on the whims of banks and borrowers makes reflation attempts hard for the authorities to control. (See Fisher 1936, Ch. VII.) And of course reflation can restart the boom and worsen future depression. The point to realize is that secondary deflation with its pesky monetary disequilibrium is a consequence of the bust not cause of it.[33] It can, however, turn a mere “recession” into a “depression.”

Third, and this will be called the "catalyst," consists of two parts. (1) If I anticipate that numerous other people's risk preferences will rise, then I might refrain from spending also in order to take advantage of lower prices in the future. This accelerates price deflation and hastens recovery. This is different from the subjective factor: hoarding is quasi-permanent withdrawal of money from circulation; investment into money is a temporary strategy to profit from lower prices in the future. The former us motivated by fear, the latter by rational calculation and indeed courage. (2) (Unexpected) deflation benefits (present) creditors at the expense of debtors. If debtors, in order to meet their now harsher obligations, curtail their consumption to a greater extent than creditors will increase it, a likely scenario, then deflation will be sped up.

The spiral on the other hand may be moderated by what are called the "Keynes effect" and the "real cash balance effect" which are really two different ways of expressing the same point. The former says: lower prices may be treated *as if* people have more money which is *as if* the money supply has gone up which is *as if* the LM curve shifts to the right, lowering the interest rates and raising aggregate demand. (See (II, 7-8) for the explication of the IS-LM model.) Lower prices drive down the demand for credit and the interest rate. The latter says: lower prices may come with lower incomes, but the total money supply in people's hands remains the same, so people with savings enjoy higher purchasing power of their existing money holdings which stimulates autonomous consumption, i.e., the consumption that would take place even at zero income. The idea is that demand for money eventually levels off and stabilizes in a depression which puts upward pressure on prices. Secondary deflation will proceed until the price level reaches the value set by the equation of exchange, MV / Q, with M lower because of credit contraction and bank failures and V lower because people hoard out of fear for the future. What the RCB effect can do is counteract this fear and hence arrest the cumulative decline in V. There is a limit to the diminution of V, but M can fall both dramatically and continuously. Hoarding then can be healing insofar as it is a response to fear that allays it; collapse of the money supply has no such redeeming qualities.

The phenomenon of a depression can be split into two questions: first, why companies collapse en masse; second, why new companies do not hurry to be established in their stead. The first question has already been dealt with. We might answer the second question by saying that people's "animal spirits" are down. But that alone is not sufficient to prove that there are good reasons for it, that there is no antisocial aspect to hoarding. We must add that it *really is* reckless to invest in the first stages of the bust. The "spirits" will be lifted again

a. when people feel that they are sufficiently protected against future dangers,

b. when the prices of factors have declined sufficiently to permit new profitable investments into them, and
c. when interest rates settle at their proper level.

Then folks will slowly begin venturing out of their dens, as it were, and resume consuming and investing. This is another meaning of the alleged "paradox of thrift." To Keynesians, the utility to individual savers of greater security is outweighed by the social viciousness of hoarding. It, say the Keynesians, (α) prolongs the depression, (β) decreases output, thereby lowering each individual's share of the economy's consumer goods (contrary to the express purpose of not consuming to increase it), and (γ) causes unemployment, pushing people out of social cooperation. The paradox is supposed to be that if one person hoards, and no one else does, then the harm to the economy is negligible. But if this behavior spreads, then the result is the equivalent of mutual noncooperation in a prisoner's dilemma: maximizing individual self-interest harms group self-interest. The reason is again that the demand for money increases, but the supply of goods goes down which defeats the purpose of hoarding in the first place. I will now argue that all these charges are false.

With respect to (α), hoarding does not prolong the depression but on the contrary hastens recovery. The objective factor, subjective factor, and the catalyst driving the deflation work together to make it deeper and therefore last a shorter amount of time. Stated differently, *the most efficient way of recovering from a bust is to permit (or even induce) fast deflation*. Interesting how the very thing that Keynes considered to be an economy's bane, namely, deflationary expectations, is actually the source of its salvation. It is repugnant to reason to want a less painful depression which lasts longer because that keeps resources un- and underutilized longer. The faster the depression will end (assuming no more credit expansion), the greater will be the prosperity achieved in all the years following it as compared to a longer yet "milder" depression. Indeed, a mild depression only continues the illusion that everything is sort of Ok. On the contrary, truth will set us free: everybody must be clear on how to behave in order to redirect every available resource toward genuine service to the consumers and bring about sustainable growth. Hoarding is shock therapy.

It is true that once the hoarding has served its purpose, it is no longer necessary and becomes a liability. Fear is not healthy either for an individual or for society. (1) For the former, a hoarding mentality destroys both enjoyments which money can buy and that risk-taking that carries with it a chance of victory. "Cowards die many times before their deaths; The valiant never taste of death but once," Shakespeare wrote. But to argue like *this* is to leave the realm of economics and indulge in ethics, a fine affair but beside this point here. (2) For the

latter, an increase in the rate of hoarding may depress the entrepreneurial spirit. But what if the government has ruined the economy such that *less* entrepreneurial spirit is now called for? Hoarding does more than just lower *V*; it heals the economy in two ways, by reducing both consumption and investment. First, people stop buying luxury goods such as expensive coffee or cigars or organic fruit. That the purveyors of luxury goods suffer is entirely in tune with reality since it signifies that the economy is returning to some point on its production possibility frontier (PPF). This means that all deception of incredible wealth is being purged from the people's mindsets. This effect undoes the boom-time overconsumption. Second, interest rates rise due to hoarding in the short run because each individual will need a greater incentive to forgo the security brought about by hoarding and invest. This imparts a good deal of *responsibility* to those new entrepreneurs. Once, when I was living in Manhattan, I was buying a suit, and the proprietor of the store recounted how his business suffered during the 1990s boom: people stopped wearing suits to work, even in established companies. Such a happy and optimistic atmosphere was felt by everyone, and the economy was so awash in money that managers did not feel that the sense of business respectability needed to be maintained by requiring employees to dress well to work. Hoarding puts a stop to such nonsense. Thus, society is saying that we want (1) less wild risk-taking and (2) more responsible investing. We want people to come up with business plans that will actually and reasonably project some kind of profit in the future. Only to such people will the hoarders agree to loan money. There are stricter expectations of success and of profits. This helps to ensure, unless fouled up by the government for the umpteenth time, that there will be no repetition of the boom, and that the economy will not again proceed beyond its PPF. This effect prevents malinvestment. Fear, though perhaps one of man's greatest enemies, has its uses. The danger is that while these effects drive the economy down to the PPF, they may overshoot and drag it below it, as well, for a spell.

With respect to (β), therefore, it is not true that the economy is underperforming during a bust as I had the Keynesians assert above: on the contrary, it is being *saved*, both figuratively and literally. Hoarding decreases output only in the very short run, otherwise it is a reaction against the mania of the boom and preparation for (a) more entrepreneurship and (b) more responsible and therefore successful entrepreneurship which will in time bear fruit and restore prosperity. The preposterous (in hindsight) projects started during the boom have already naturally folded; hoarding does not make matters worse but rather conserves and eventually replenishes whatever capacity for growth still remains in the economy. The economic yang has discredited itself temporarily; as payback, yin must devour the losers in order to be

placated.

It is true of course that the PL disequilibrium due to a hoarding-induced drop in *V* can harm even some sound businesses. This need not be a problem if the price level is allowed to fall. What can deter production is *expected* price deflation insofar as entrepreneurs refuse to invest a higher amount of present money only to receive less future money in sales revenues. This, however, is precisely our catalyst. So long as deflation is expected, and the more serious it is imagined to be, the cleansing process to that extent becomes more grueling and rigorous. However, it does so in the shortest possible run, and the overall human discomfort will be about the same.

Government's fiscal policy, i.e., borrowing and spending on public works (or borrowing from some citizens and sending checks to others), can attempt to borrow from the public's hoards and thereby increase velocity. I already argued that such an antidepressant is a dubious remedy.

With respect to (γ), with hoarding, workers and other factor owners are forced to face a grimmer reality. But if they are smart and flexible enough to adapt to the post-boom environment, then there need not be more unemployed factors than under a less severe depression. The factors will have to endure lessened income, but there is no reason why the number of those not working at all should necessarily increase for a prolonged period of time. To continue my story, after the tech boom ended at the turn of the century, I was out of work for 6 months and, once I found a new job, my wages dropped by 50%.

Skidelsky (2010) has Keynes believing that "capitalism suffered… from a surfeit of fear" (113-4). This perhaps is one out of two major planks of Keynes' "general theory." Fear due to uncertainty of the future lessens aggregate demand, causes people to treasure money as a store of value, and the economy tanks as a result. As we have seen, however, becoming afraid is a consequence of the collapse of a self-destructive boom. Mass entrepreneurial losses represent economy-wide imprudence, a colossal failure to achieve happiness. The fear of the consumers and investors upon this disaster is unavoidable. The public cannot just be reassured or taxed-and-spent; recovery must come naturally. I will admit that this fear may in some cases become pathological. Normally, however, hoarding in a depression is a valuable defense mechanism. It can be overdone but usually does more good than harm.

44. That lower wages are a cure for unemployment

The "classical" argument is that "a reduction in money wages will *cet. par.* stimulate demand by diminishing the price of the finished

product, and will, therefore, increase output and employment up to the point where the reduction which labor has agreed to accept in money-wages is just offset by the diminishing marginal efficiency of labor, as output… is increased." This rendition is poorly phrased; what will happen is that costs of production will diminish; then new profit expectations will incline entrepreneurs to increase supply which will increase the equilibrium quantity supplied and reduce the price. In order to produce the higher quantity of the good, new workers will need to be hired. Immediately after that, our author says that "this is tantamount to assuming that the reduction in money-wages will leave demand unaffected" (*GT*: 257-8). Is the demand stimulated or unaffected? Plainly, in the first quote Keynes must mean quantity demanded for a particular product, while in the second quote he means aggregate demand for the entire economy.

Keynes continues the exposition of the classical view as "that the reduction in money-wages may have *some* effect on aggregate demand through its reducing the purchasing power of some of the workers, but that the real demand of other factors, whose money incomes have not been reduced, will be stimulated by the fall in prices, and that the aggregate demand of the workers themselves will be very likely increased as a result of the increased volume of employment…" (*GT*: 258). He even agrees that "a reduction in money-wages *accompanied by the same aggregate effective demand as before* will be associated with an increase in employment" (*GT*: 259). He seems to be objecting that lower wages would not increase employment because they'd *lower* aggregate demand thus defeating themselves, even if, if they kept aggregate demand *the same*, employment would increase and in so doing *raise* aggregate demand. Aggregate demand which alone determines the level of employment will then fall and can only be raised by a proper change in the propensity to consume, the schedule of the marginal efficiency of capital, or the rate of interest. Unfortunately, lower wages do little to affect these crucial variables. Some such bizarre logic must be considered if we are to make sense of the argument.

Labor costs can decrease throughout the economy either when there is a decrease in the demand for labor, e.g., in the slump part of the business cycle when entrepreneurs' going out of business causes "jobs" to be "lost," or when there is an increase in the supply of labor, e.g., as a result of heavy immigration into an area. I will discuss the first case in the next chapter. In the second case which I will be considering throughout, the question is what makes it possible for more labor sloshing around out there to be hired. Keynes argues that entrepreneurs will obtain higher profits (as a result of lower labor costs) only if "there is no gap between the increment in income [to the community] and the increment in consumption." All that new income will have to be spent

on the goods just produced, lest entrepreneurs take losses. (Remember that we have assumed that all entrepreneurs step up production due to a decrease in labor costs.) That is why Keynes writes that marginal propensity to consume must be equal to 1; that is, the entire increase of income accrued must be spent on consumer goods with nothing saved, where by saving Keynes means hoarding. So, "the proceeds realized from the increased output will disappoint the entrepreneurs and employment will fall back again to its previous figure" (*GT*: 261).

It should by now be clear that hoarding is a complete red herring; if there is any hoarding among the newly employed workers, its result will be a further lowering of the wage-price level until the system is once again in equilibrium.

Keynes' alleged insight takes the form of a simple reckoning. Lower costs benefit an individual company but harm all other companies by reducing demand for their products (on the part of the workers whose wages have been cut). Lower costs to particular firms go together with lower effective demand to all firms. On the whole, benefits equal costs. If an ERE with unemployment existed before, then any new ERE will also contain unemployment and moreover will be reached via losses to various entrepreneurs. Why should we allow such a futile inefficiency to be attempted? Here is the reply. Let us assume that before our immigrants disembark from their ships, the ERE subsists in the state of full employment. The moment they enter the job market, however, they start counting among the unemployed. One of the meanings of disequilibration is a state of affairs in which some factors are paid less than their DMVP, but in our particular case the immigrants are producing nothing and being paid zero for it. Keynes has a point: the economy may still be called equilibrated if *vacuously* so. Even this sense is attenuated if we add reasonably that a state of equilibrium is characterized by no worker starving to death.

By what process will the immigrants be incorporated into social cooperation? If it starts with saving, the money has to materialize from either other investments or consumption. Wages for existing workers will be cut in both cases. To make it more concrete, suppose Smith is employed at firm *X*, working 8 hours a day and using capital good *K* in production. Jones comes into the picture and seeks to compete with Smith. They'll quickly bid their wages down to the reservation wage of one of them, and their work hours will be cut, say to 5 hours for Smith and 3 for Jones. We can see how capital goods have become more scarce and more precious relative to labor. There is also a temporary decrease in the standard of living of the native workers. The lower costs to *X* will immediately result in the appearance of profits and therefore RC disequilibrium. *X*'s competitor *Y* will notice the easy money and will want to imitate *X*. The way to do so is to reallocate some resources to

produce more goods like *K* and lure Smith or Jones to work for *Y*. The resulting capital accumulation will raise wages, lower prices, and arbitrage away the profits. As a result, the vacuous unemployment equilibrium is transient and will tend to resolve into first, a higher-employment disequilibrium, and second, a normal full-employment equilibrium. Keynes' premise is therefore false, and the argument, unsound.

If, on the other hand, *both* labor and capital goods are idle, then the problem is much simpler. The only reason why unemployment would persist is due to wages being coercively held above market-clearing levels. Note that in this case, when unemployment is only temporarily fixed by inflationary injections, excess capacity within firms waiting to be filled is unstable. Asks Ludwig Lachmann (1994), "Why should [an entrepreneur] bother to maintain those of his capital resources which, experience teaches him, yield income only intermittently? He would scrap them and put the proceeds into financial assets." (189) Surely it is implausible that he is endlessly waiting for the next spasm of money printing. Hence mispricing will destroy capital, inflation or not.

Again, (1) the new immigrants will stand in need of more capital goods if the overall standard of living is to be maintained. Those goods will be created in time. (2) If 1,000 people arrive to an area in search of opportunities, then while most of them will have no higher ambitions than to be workers, we should expect some of them to become entrepreneurs and provide those opportunities to others who will include both the natives and the rest of the immigrants. Even if, per impossibile, no new entrepreneurs emerge, cheap labor is a profit opportunity for existing firms. What this means is that aggregate demand or aggregate consumption need not decrease as a result of a decrease in money wage rates (a point made in (I, 5)), but employment can grow.

It is a consequence of Keynes' theory that immigration is always futile, and that labor mobility as such is not a social virtue: the immigrants cannot without government assistance be integrated into the economy. But since people move most of the time precisely to take advantage of job opportunities in other areas of the world, Keynes proves too much.

So far I have been presenting my case as if all workers were the same. But in the real economy each company faces its own unique labor situation. Each worker after all has a unique collection of human capital. In company *X* workers *A*, *B*, and *C* are paid less than their (discounted) marginal value product, and workers *D* and *E* are stupidly paid more. In company *Y*, all workers add more to *Y*'s output than they cost to the owner, allowing room for expansion, e.g., by reinvesting the profits.

Company *Z* is losing money because most of its workers are overpaid and it cannot get rid of them, say, because of union machinations. In short, contracts are made between individual companies and workers, and no one needs to be unemployed if he can contribute to any production process more than what he asks in return for his services. Any worker will tend to find that occupation to which he can contribute the greatest. In other words, it makes sense to desire a situation in which wages and prices are balanced on the level of individual firms, not on the level of macroeconomy as a whole. This belies Keynes' claim that "wage reductions, as a method of securing full employment, are also subject to the same limitations as the method of increasing the quantity of money" (*GT*: 266). The two could not be more different.

If one business or industry is disadvantaged by mandated high wages, then wages in other businesses or industries will be depressed due to greater competition between workers (i.e., greater supply of labor) there. The problem with labor unionism is not that union members contrive to raise their wages at the expense of the wages of everyone else. It is rather twofold. First, many unions use unjust violence against their employers and those employers' customers. As workers are banished to suboptimal jobs elsewhere, wage incomes are redistributed from the least to the most brutal people which both sets up a bad incentive and is a dysgenic influence in the long run. Second, unions are shaky if entrance into the unionized industry is free. If Smith is required to pay his workers $50 / hour, yet those workers given their present skills could be employed elsewhere for only $30 / hour, then any new entrepreneur would obtain a competitive advantage over Smith by hiring nonunion workers for $31 / hour. If on the other hand people are prevented either by law or union thuggery from competing with Smith altogether, then this checks creative advance in the unionized industry, fosters stagnation, and is clearly antisocial for those reasons. Society as a whole earns less real income than it would on the free market.

It is only if the entire economy is thus regimented that the labor market will fail to clear, and there will be institutional involuntary unemployment. In such a case any particular paroxysm of inflation, recommended by Keynes, will be a short-term remedy. The problem will come back. What is needed is social progress toward laissez faire, not a primitive trick like fooling unions with inflation. Union members learn too, and to the extent that inflation becomes a standard policy, people will sooner or later catch on and nullify its effects.

Wages then are determined by individual bargaining between particular workers and particular firms within the limits set by supply and demand. Whether a given wage is too high or too low is discussed during job interviews and performance evaluations. "Aggregate

demand" is simply irrelevant.

Economists who are concerned with unemployment should focus not on aggregate demand but on the *creators of jobs*: the entrepreneurs. (Though of course entrepreneurs are *reluctant* job creators, preferring rather for any given project to minimize their expenses including on labor. And they destroy old jobs in the process of creating new ones.) They should insist that no obstacles be placed to the authority of entrepreneurs to set prices, determine their hiring and firing policies, negotiate wages, and enter or expand within any industry whatsoever. Most important, they should demand that the government and the laws not foster an environment in which mass entrepreneurial losses and therefore unemployment are inevitable, i.e., the business cycle.

45. Wages, cont.

In Chapter 19 Keynes proposes that we are in a depression and that wages and prices of factors of production are too high. One could append to this that the reason for it is that booms are characterized by malinvestments such that the capital goods and worker skills that used to be thought useful to human beings are revealed in a depression to serve no purpose. The objects (specifically, high-order capital goods) and technical knowledge are still there; they just no longer contribute to human happiness, the opposite of which was mistakenly thought during the preceding boom. Given that some of these objects are relatively nonspecific, there is a chance that they can be recovered by being reallocated to different uses. But in order for that to happen, their prices must fall, sometimes dramatically. This situation is paired by Keynes with decreased demand because people are sitting on their money and waiting until wages and prices hit bottom (what we have called the catalyst). The prices of capital goods and labor employed in the early stages of the production structure go down faster than the prices of consumer goods. I argued earlier that under secular noninflationary economic growth, nominal wages fall *slower* than prices such that real wages rise. This is not a contradiction because in the present chapter I am dealing with the consequences of the business cycle, not with the general long-term trend of positive net savings resulting in higher physical productivity of longer processes and lower discount rate of future goods.

Here it is the *relative* prices that are wrong. Keynes envisions that the depression will be accompanied by wages and prices of finished goods going down in unison: "The most unfavorable contingency is that in which money-wages are slowly sagging downwards and each reduction in wages serves to diminish confidence in the prospective maintenance of wages." (*GT*: 265) Thus, the slow adjustment of the

absolute price level is bad, Keynes thinks.

If by "wages" Keynes means prices of factors of production generally and if his point is merely that, assuming that there is such a thing as an evenly rotating economy with unemployment such that the unemployed ex vi termini are unemployable, this economy cannot be cured by means of lowering the absolute wage-price level, then I have no quarrel with him. We can move the factor prices / consumer goods prices level up and down as much as we want with no effect. But why make his assumption? Since when is a depression an ERE, anyway? Keynes claims that the best way to bring wages in alignment with economic fundamentals during a depression is not by lowering the wages but by raising the price level through inflation. Now if, according to Keynes, lower wages result only in lower aggregate demand which preserves the unemployment equilibrium, why wouldn't inflation result in *higher* wages, at least soon enough, *again* preserving unemployment equilibrium? Maybe the argument is actually something else. Dillard (1948) proposes that Keynes' beef with the classical theory resolves into a "practical matter": Keynes "does not even say that wage cuts can never result in some increase in employment. What he does deny most emphatically is that wage cuts are of practical significance in restoring higher levels of employment. … Keynes sees the cure in an expansionary monetary and fiscal program designed to increase the volume of effective demand." (210-1; 220) Inflation then is simply more efficient.

Ideally, Keynes says, it would be great if wages could be brought down to the bottom immediately without a period of time during which they slowly creep downward. He need not worry, for *expectations* speed up wage and price adjustments. If people expect prices to fall, then they abstain from spending, causing demand for money to pick up which increases the money's purchasing power and lowers prices still faster. The time it takes for the wage rates to decline can be very short. Note that the economy's self-healing interferes with the working of the inflationary stimulus such that the two together will proceed no faster that either one alone; at any rate, the self-adjustment can get the economy out of a depression quicker than the Keynesian inflation. What Keynes wants in a perfect world is to "secure a simultaneous and equal reduction of money-wages in all industries. … But this could only be accomplished by administrative decree and is scarcely practical politics under a system of free wage-bargaining." (*GT*: 264-5) His solution? Inflation, because "a change in the quantity of money… is already within the power of most governments" (*GT*: 267-8). The idea is simple: inflation dilutes the purchasing power of money, leading to a decline in real wages which increases the quantity of labor supplied and therefore reduces unemployment. Hence the famous Phillips curve of the alleged trade-off between inflation and unemployment.

We have seen that secondary deflation during a depression, brought about by the collapse of the money supply due to credit contraction and failures of fractional-reserve banks, can make the absolute price level wrong. It's only then that wages need to fall across the board. For reflation to fix the PL disequilibrium, such as by bailing out the banks, it's damned if you do and damned if you don't. But attempting to maintain the price level is as far as this treatment goes. It does not work for repairing relative mispricing. Money is not neutral in the short run which means that during a money supply inflation new money is injected into the economy at particular points, causing local price increases. Those who get the new money first benefit because they get to spend it before the general increase in prices commences, while those who get the new money last, such as individuals on fixed incomes, lose because they have to contend with higher prices now everywhere. Hence those prices that will rise first *will have nothing to do with how wages ought to be structured*. How does Keynes know that those prices will increase where labor is overpriced, compensating for this state of affairs? Inflation is an unpredictable and uncontrollable phenomenon. Who gets the money first and who last is never known in advance. Spurred by inflation, those entrepreneurs who happen to be the lucky first recipients of the new money bid up the prices of the factors as they spend that money, so when factor prices rise, only those companies which can afford to price their products higher will survive. Other companies which might well include precisely those that were supposed to be helped by inflation will have to fire workers, shrink, or go out of business altogether. Printing money cannot "secure a simultaneous and equal" increase in money-prices "in all industries."

In other words, in a depression or bust the main task is to reallocate the malinvested capital and labor, not lower wages wholesale, though the way this is accomplished is by the prices of these factors dropping dramatically. The price cuts are a signal to entrepreneurs that the factors are up for grabs cheaply. They obtain an incentive eventually to put these goods to new and sustainable uses. (To the extent that there is secondary deflation, there is no need to worry, as Keynes does, that a fall in "wages" will cause a fall in "prices" because prices fall *first*, of which wage adjustments are a consequence.) That a coordinated drop in wages is difficult to accomplish is a red herring. Not all wages and prices are out of whack, only those commanded by factors employed in businesses that never made a dime in profit during the boom and went broke in the bust. The main hurdle is that wages and prices are misaligned relatively, not absolutely. The idea that "a flexible wage policy and a flexible money policy come, analytically, to the same thing" (*GT*: 267), except the latter is more "practical" because of labor unions, etc., is therefore irrelevant: we don't need either policy. We

need an end to the business cycle.

Keynes claims that the only hope for the economy to self-adjust lies in the effect of "a falling wage- and price- level on the demand for money." He believes this may lower interest rates. But we can "produce precisely the same effects on the rate of interest by reducing wages, whilst leaving the quantity of money unchanged, that we can produce by increasing the quantity of money whilst leaving the level of wages unchanged" (*GT*: 266). Presumably he means that lower prices can cause dishoarding as people feel that they do not need to keep as much money as before to deal with future uncertainty. Their increased spending on both consumer and investment goods provides some sort of stimulus to production and employment and arrests the price drop. This is a straw man, but then if we assume with Keynes an "unemployment equilibrium," perhaps this argument is indeed the best we can do. For Keynes the economy is not self-adjusting because its grand aggregates are permanently mismatched. In fact, self-adjustment manifests itself in the fact that the economy equilibrates the marginal cost and revenue of each individual resource.

Suppose now that inflation could, contrary to reality, raise all prices by the same percentage. Would that have the desired effect? There are a myriad of wages all fluctuating relative to each other. It is impossible to replicate their mutual attunement by such crude a mechanism as monetary policy. If inflation could succeed at bringing down real wages by 5%, then the misalignments would still persist. Down to *exactly what values* should wages be brought, i.e., *which* wages are too high and *by how much*? Some are too high, others are too low, still others are just right. For example, inflation would unbalance things by lowering the already low wages. There is no escape from the need for wages and prices to adjust relative to each other. The ability to change is essential to prices. Wages and labor services are results of contractual agreements. Some sort of "lifelong" contract in the face of constantly changing market data makes no sense. If government or union aggression interferes with price formation, then economists need to fight to free the market, not call for inflation as a desperate, toxic, and ultimately futile remedy. As William Hutt (1979) points out, "inflation has, when unanticipated, been successful in stimulating production in peace and war solely because it has brought prices into better relations with one another. Its 'successes' are, in effect, proof of what noninflationary coordination can achieve with incomparably greater efficiency and lower cost, provided political institutions render that possible" (156-7, italics removed). Unemployment develops because sordid violence sabotages the working of the price system, not because of insufficiency of demand.

In other words, Keynes starts out by assuming that "in the

beginning" (of his causal story) the wages are correct. For some unknown reason, however, they become too high. What is to be done? To a "foolish," "unjust," and "inexperienced" person (*GT*: 268-9), it would seem that Smith whose wage is too high should be, if his boss knows what is good for him, either fired or offered a pay cut. But no, says Keynes. The government should rather print lots of $100 bills, throw them from a helicopter, and hope that Smith's employer will catch some. This is scarcely a parody of Keynes. In the words of Hutt, Keynesians consider monetary manipulation to be a "universal solvent of all price disharmonies" (117). It's a solvent alright, except it dissolves social cooperation itself.

Further, what about businesses that are honest-to-goodness failures, depression or not? Showering them with money will cause their owners to rejoice, but the net effect will simply be uneconomic use of scarce resources: the failing entrepreneur must let go of his factors or retool his business radically, and the found money prevents these from happening for at least another round of production. In other words, a loser remains a loser whether he is surrounded by an unusually high number of other losers (in a bust) or not (in a free economy). Society is harmed *more* when numerous losers are coddled than when only a few politically powerful businesses get unjust favors from the state. Keynesian medicine is poison to the social body.

Keynes may reply that given sufficient stimulus, *on average*, numerous business losses will turn into profits. There are short-, medium-, and long-term aspects to inflation as a proposed depression cure. Losses, even mass losses, are not an unmitigated evil; they are a sign that resources have been woefully misallocated. Fever feels bad, but it may fight infection, and treating fever is rarely a priority, in fact it may be counterproductive to the organism. Yes, entrepreneurs suffer, and workers suffer with them, but the economy does not revolve around either but rather around the consumers, though of course every worker is also a consumer. That these latter were being poorly served is revealed in the bust. Feeding business firms with money allows them to keep operating at the expense of general welfare. It spells an end to entrepreneurial rationality and retrogression, making the nation poorer.

The other two aspects are split between whether credit or fiat money is created. The medium-term aspect for the *former* is that people come to expect inflation. This causes interest rates to rise and increases the costs of doing business to all long production projects. Inflation will need to be continuously ratcheted up and moreover in an unpredictable fashion in order to have any effect (we'll deal with this point later). For the *latter*, suppose that the government simply printed enough money and directly subsidized the failing entrepreneurs. That would be a disaster as people would be able to hold onto scarce resources even if

the market signals them otherwise. If there is more spending due to fiat money creation, then factor prices will be bid up in short order and all the difficulties will reappear. The long-term effect regarding *credit* expansion is the need to choose between allowing the economy to cleanse itself, hyperinflation (if inflation is predictable), and complete economic chaos (if it is not). Regarding *fiat* money creation, it is the need to choose between consumer and government sovereignty. The state cannot take over consumption.

Thus, inflation patches up the symptoms of economic illness only in the short run, is altogether ineffective in the medium run, and is destructive in the long run. Keynes may not have been an explicit inflationist, but endless inflation is an inevitable consequence of the policies he favored.

We can also wonder why workers would resist wage decreases, while *consumers* must docilely acquiesce to price *increases*? Why is it easier for companies to raise millions of prices than to negotiate down millions of wages? Perhaps because prices are set by a single party, namely, the entrepreneur, while wages are negotiated by two persons not one. Doing the former would, according to Keynes, seem to lower transaction costs: wage adjustments would "probably [be] completed only after wasteful and disastrous struggles" (*GT*: 267). It's true that there is an element of loyalty between the firm and its employees. Lowering their wages is tantamount to despising what are perhaps years of faithful service. Moreover, a company might "invest" in its labor force by training it. A worker may possess special technical knowledge of the product on which he is working which constitutes his human capital and so may be difficult to replace. Consumers, on the other hand, are fickle and have no loyalty to any producer in the first place. This is a cultural peculiarity; its analysis does not belong to economics and therefore is out of place in *General Theory*. At any rate, Rothbard (2004) disposes of this argument as follows: It may appear, he writes, that "only the sellers (or buyers) are setting the price. Thus, a good might be sold in retail shops, with prices simply 'quoted' by the individual seller. But the same process of bidding goes on in such a market as in any other. If the sellers set their prices below the equilibrium price, buyers will rush to make their purchases, and the sellers will find that shortages develop, accompanied by queues of buyers eager to purchase goods that are unavailable," etc. (118)

It is certainly not the case that "a change in the money wage for a particular skill or other subgroup of workers… represents an obvious change in the position of that group relative to other workers," while "a change in product prices… affects everyone, whether they work to produce the affected commodities or not" (Chick 1983: 150). Changes in product prices affect not "everyone" but only those people who buy

those products. Now the basket of goods that Smith buys is unique to him and perhaps to a few other people. Lower wages for Smith's skill set affect Smith and a small group of other workers; higher prices for Smith's preferred basket affect Smith and a small number of other consumers. The symmetry is quite fetching. It seems equally probable that Smith will be unlucky in one way as in the other. Whether Smith loses because his money wage has gone down while other workers' wages have stayed the same, or because his own wage has stagnated while other workers' wages have kept the pace with the rising prices seems singularly irrelevant.

Finally, Keynes' mention of a social injustice of flexible wage rates is probably due to his view that those whose wages are contractually fixed should not benefit relative to those whose wages can easily adjust downward. First, I am not at all outraged that such a thing is possible. Keynes gives no ethical reason to resent it, and it is hardly self-evident. Second, it merely presents an incentive to employers to try to keep all wages flexible. No one forces anyone to have "fixed salaries." In any case, the most important purpose of wage flexibility is not so much for wages to adjust toward prices during a recession but for wages to change *relative to each other* generally. Whatever the system of coercively set rigid wages is, it is not capitalism. Third, it is precisely adjustment to inflation that is "long and painful… [and] creates inequities, perversities, and inefficiencies. Retired workers and others on fixed incomes suffer, wages lag behind prices for workers locked into multi-year labor contracts, and the price system in general functions poorly." (Garrison 2001: 114)

For example, if inflation can deceive the workers, it stands to reason that it can also deceive entrepreneurs who will falsely think their profits (having been made with money whose purchasing power is declining) are higher than they really are. This may cause them to consume more of their nominally higher incomes and therefore fail to replenish their capital. The deception will then have an inadvertent, and unauthorized by the consumers, effect of destruction of capital. Inflation can occur under sound money too, but as Arkadiusz Sieroń (2019) points out, "in the gold standard with a 100% banking reserve, money supply would be easy to calculate, and its increase would depend on the profitability of mining operations rather than arbitrary decisions of politicians and central bankers, so entrepreneurs could easily anticipate such economic fluctuations and adapt accordingly" (28-9). Conversely, if an extremely profitable gold-using industry arose that found it useful to melt gold coins and use the metal in its production, that would be deflationary but equally predictable.

To summarize: (1) inflation during the boom causes unemployment during the bust; (2) arresting secondary deflation by

maintaining the money supply may be a reasonable policy if we're stuck with our rotten system of money and banking; (3) relative prices must be left to adjust freely. Civilization, Richard Weaver pointed out, requires making distinctions. Laissez faire makes them and constitutes the differentiated market body; "monetary policy" as Keynes envisions it treats society as homogenous syrup. It is not true that relative wage adjustments and inflation are "alternative means of changing the quantity of money in terms of wage-units" (*GT*: 267). *Involuntary* unemployment discussed in (I, 44) calls for a political reform of labor policy toward freedom of contract between employers and employees, not inflation. *Cyclical* unemployment considered here requires a massive reshuffling of resources, and inflation can only postpone the day of reckoning while making things worse. *Monetary* unemployment due to a significant absolute PL disequilibrium is likewise an aspect of the business cycle. Under laissez faire with 100% gold money, there is neither inflation nor unemployment. The Phillips curve, for which too low an interest rate leads to inflation and too high a rate to unemployment, is simply irrelevant, because the market interest rate is precisely the correct one, and no specific monetary policy is either needed or possible.

46. That depressions cannot be fought with (1) bailouts

The practice of "bailing out" troubled businesses as part of the government's "fiscal policy" (see Part II for more details) during a depression has several properties. First, bailouts represent *special privilege* to particular market players to protect them from bankruptcy. This insulates these firms from the market forces such that they remain afloat whether they do well or poorly at satisfying consumer wants. Resources cannot be reallocated from what have been revealed as useless projects to more urgent ones, again as determined by the consumers. The government is channeling the money into unprofitable for society uses.

This privilege, since protection cannot be extended to every single firm without resulting in a particularly absurd form of socialism and in complete computational chaos, is gravely iniquitous. It is destructive of the impersonal order that is the free market. It is true that business and production are quite personal, e.g., if one knows what he is doing, then one invests into an *individual entrepreneur* with a *specific idea*. But consumption is not. On the market it is never about "who you know," it is almost always about how much money you have in buying and the quality and price of your product in selling. The free market does not respect persons or firms. Goodwill is hard to obtain and easy to

lose. Under hampered market, on the other hand, there arises a class of Mafia-like "connected" companies with privileges bestowed on them by the coercive power of the state. They are personal friends of the political elite. They are exempt from the discipline of the market which beats and decimates its every member who fails to please the consumers. This favoritism, I want to argue, is not merely uneconomic, though it is that; it is unjust. Government cannot pick winners in the marketplace – only consumers can, but losers surely pick government as their refuge from the rigors of free enterprise.

These special privileges resemble Soviet *блат* or the ability to obtain goods and services through personal connections to the powers that be, nepotism, exchange of favors, and the like. Thus, if one knew someone who worked at a meat factory and could routinely privatize government property by stealing, then the *несун* or "carrier" who could get the valuables past the guards (such as by bribing them) could do him a favor by selling him the meat. If one was in a position to return the favor, then a long-term relationship would be established. The alleged equality of the Soviet regime was nothing of the sort: those who were thus connected enjoyed a somewhat better standard of living. Perpetual shortages of goods pitted buyers against each other creating hatreds and inefficiencies. Social classes were delimited based on who could obtain some of the goods that the Westerners took for granted including necessities (indeed toilet paper) and who had no such privileges. This encouraged envy for those "above" and contempt for those "below." The nomenklatura and the Communist party elite were "made guys," but there was also a swarm of "connected guys," to use the more familiar terms in mafia lore. People who emigrated from the USSR to the U.S. often report the joy of feeling equality of dignity with their fellow men such that they no longer have to grovel for favors from (slightly) better-positioned citizens. The United States' big government with its corporate welfare, regulatory capture, and all that is *блат* lite.

Second, bailouts represent *subsidizing failure*. And when you subsidize something, you get more of it. What incentives will the failing companies have to strive for profit through faithful service to their customers and for standing on their own feet? This is the question that haunts all protectionism, whether through bailouts or tariffs or subsidies or monopoly grants. If the purpose is to make a firm or industry strong or able to compete in the market, then protecting it only makes it weaker. One must throw each company out into the "dog-eat-dog" competitive environment and through these pressures force it to improve and excel. Nor is there an analogy from protecting human children and the elderly to protecting "infant" and "senile" industries. If an industry is foreseen to be profitable only after it matures, then investors will still put money into it *now*. The government cannot find

out which industries or firms ought to be kept alive and which aborted, it is a terrible entrepreneur, its own enterprises, such as the Post Office, can be depended on to lose money with remarkable reliability and are kept in operation only by means of taxpayer dollars and the force of law such as indeed laws establishing a monopoly. And if an industry or firm is no longer profitable, and its prospects are dim as far as the investors believe, then the utilitarian thing is to let it "die."

Third, bailouts represent *socialism*, in other words, they give socialists a case for outright nationalization of banks and other industries. For truly why must society secure losses while still allowing private profits? Cassidy (2009) correctly notes that "in America the only respectable socialism is socialism for the rich" (331). The (long-term) harmony of interests vanishes. Taleb (2010) complains that "when 'conservative' bankers make profits, they get the benefits; when they are hurt, we pay the costs" (43). This system is not a strange accident, it was brought into existence entirely by design. Nor is it any sort of secret or conspiracy; on the contrary, the scheme is openly, though falsely, glorified as being in the interest of the commonweal, for the greater good, entirely conducive to economic progress and general prosperity, and the like.

But if this function is socialized, then any failure of the government to turn a profit will be covered by the taxpayers. In the case of banks this will remove every incentive to the bureaucrats to discriminate between loan applicants. Money and resources will go into absurd enterprises. There will be politically correct causes and politically connected firms which will receive preferential financing. Private banks will be put at a disadvantage if companies' futures depend not on them but on the decisions of the American Socialist State Bank because the State Bank's investments would be guaranteed.

Finally, semi-socialism of this sort will create a case for overall central planning as, given the arbitrariness of government investments, the structure of production ceases to be rational in connecting higher-order capital goods with lower-order capital goods and with consumer goods.

My own initial mistake in thinking about the 2009 bailouts – including the auto industry bailout – was to seek patterns in government actions. According to what rule did they choose on what to spend taxpayer money? In my naivete I failed to realize that there was, of course, no rule. For the most part the politicians "simply" reward their friends and punish their enemies. They save the politically connected elite, whether that elite reside on Wall Street or in Detroit, and whether they are CEOs or unions. Electoral politics may well play a role insofar as the bailouts were intended to buy key votes. These are cases in which the political for the government is personal.

When the bailouts began under the pretext of fighting the 2008-9 recession under the Bush administration, the President claimed that he wanted to "ensure that only viable companies would get longer-term federal help." How could he possibly ensure that when he just partially liberated these companies from consumer sovereignty? They now depend less on what the buying public wants and more on the bureaucrats. Pleasing their political masters including the contemplated "car czar" or the auto industry central planner will be more important to them than pleasing their customers. If private investors think these companies are trash, then why would the government's opinion be any more correct? Again, if such investors thought that GM and Chrysler would get their act together sometime in the near future, then they would eagerly buy their stock and lend them money in anticipation of better performance and therefore dividends and capital gains. If these "Big Three" were really about to be successful, then they would not need government loans in the first place. Bush made himself into a laughingstock when he said: "These are important companies, but on the other hand, we just don't want to put good money after bad." Some companies are profitable and because of that grow and become important, others lose money and because of that shrink and lose importance. The consumers decide by their buying and refusing to buy who will be important and how. We are aware of what is *seen*: the big automakers stay in business for a few more months. We are not aware of what is *not seen*: resources that are now stuck in apparently worthless (as judged by the market) enterprises cannot be reallocated to their more urgently needed uses. We do not see other companies, including those that do not yet exist, that might have benefited from these resources and grown in importance themselves. But the government cannot know where to channel the capital, therefore its decisions are bound to be economically foolish.

In short, bailouts are realpolitik within the country; they fail as a treatment for depression by propping up businesses that must be liquidated and whose factors of production must be released and are therefore merely legal plunder and waste of scarce resources. "Political realism," Mises (1983) points out, is "that hodgepodge of cynicism, lack of conscience, and unvarnished selfishness." (98)

47. … with (2) public-works projects

Keynes assumes three things. First, that wages are sticky downward. Second, that the economy is in a depression. Third, that there is unemployment. The cure for these unfortunate conditions is, according to Keynes, either inflation or government spending or both. The first assumption was a mere cultural peculiarity of Keynes' time. It

need not be true, an ideological change can easily correct this unhappy business practice. The second assumption, in and of itself, lacks an explanation of the cause of the depression. If the cause is inflationary credit expansion, then more of the same thing will only prolong the depression. The third assumption is also heedless of the fact that the cause of unemployment and generally of imperfect resource utilization in a depression is the unsustainable malinvestment during the preceding economic boom. Liquidation and reallocation of resources is a time-consuming process.

The Keynesian idea is that cyclical unemployment can be alleviated by boosting aggregate demand, i.e., consumption and investment. One way to do this is by means of fiscal policy or government deficit spending on public works. Here is the dynamics. The government has tied up the economy into an interventionist straitjacket. Interference with commerce enervates social cooperation. The standard of living stagnates or gets worse. The people are upset. The government, unwilling to free the market, decides to "stimulate" the economy with monetary policy. The result is a vicious boom. A bust comes. Mass losses cause unemployment. Again the economy seems to be underperforming and below its production possibility frontier, though for a different reason than before. "Depression economics" apparently counsels the state to spend in order to prevent the collapse of failing companies and loss of jobs.

This sort of government activity does not, it is claimed, take resources away from the private sector but mops up idle things such as unemployed labor. To be sure, it represents a forced transfer of wealth from the presently employed to the presently unemployed, thereby becoming a "welfare" handout. But overall the total pie grows because the unemployed will do *some* useful work as opposed to staying home and presumably twiddling their thumbs. This fiscal policy should be halted only when full employment is reached, such as via the multiplier, and there is true inflation.

This argument is wrong on a number of levels. The first thing is that it is probably impossible to pull labor solely out of its idleness. Some workers will be lured away from profitable private employment.

Second, these laborers will require complementary to them capital goods and land to work with, and it is even more implausible that *those* items will come out of the assets that the bust has rendered at least temporarily useless. So, those too will be bid away from the private sector.

Third, there is a delay in figuring out when a genuine recession is under way that limits the effectiveness of public works.

Fourth, taking the case in which the government gets its resources by taxation, the taxpayers are harmed because this is not a

mutually beneficial transaction; moreover it creates a moral hazard in which the successful are penalized for their very prudence in finding such steady jobs that are not cut during a depression. One could argue that the tax money too is taken out of "idleness" because it would otherwise be hoarded. However, as we saw earlier, hoarding is a non-malignant activity both individually and socially.

Fifth, the government does not know into which projects to funnel the money. It is quite possible that, for example, it will put the unemployed to absurd ends such as use them as soldiers in wars of conquest, thereby solving the unemployment problem by getting the unemployed killed.

One possibility here is to fund those projects that have already been authorized but frozen due to lower tax revenues during the depression. But is there any doubt that the selection of government projects to be undertaken will be politically motivated and have little to do with the common good? Moreover, it presumably makes sense for public works to take place in those areas where unemployment is greatest, in particular because labor mobility is somewhat restricted by the disutility of individuals and especially families uprooting themselves. But this means that the main criterion for selecting where to begin government-run construction is not the usefulness of the work to any community but rather a kind of make-work featherbedding. In other words, the rationale for public spending for the *frozen* projects is to produce public goods that a city deems important enough in themselves to resort to something as economically inefficient and morally dubious as taxation; communal wealth, such as it is, is created, and this ipso facto entails that the costs to the taxpayers, including of "jobs" created, are minimized as much as possible. For *Keynesian* projects, it is to boost consumption, no one really cares *what* to produce, and the more expensive the project apparently the better. The two could not be more different. No, this idea will not work either. Keynes himself, contemptuous as he is of "orthodox finance," would not have approved of it.

Sixth, setting up production takes time for the government as much as for any private entrepreneur. The consumer goods such as roads and bridges may be far from ready when the depression is over. If the point of deficit spending is to get out of a depression *quickly*, then on its own terms lavish public spending may not be feasible since grand projects (pyramids for bureaucrats, etc.) naturally take a long time to complete, especially when the government is running them. Of course, for Keynes, the point always is to get the money spent. As long as this is done, a time-consuming project may well be abandoned unfinished, halfway through. A public project is just a way of distributing "welfare" checks, only one that conceals its offensiveness a little better.

Seventh, the projects in which the unemployed labor will be used must utilize the same skills that the workers already possess, for otherwise the position of those workers will be indistinguishable from that into which the market has put them. This is unlikely to happen: will road construction require the same human capital as even house construction?

All these, however, are minor points. The arrow into the heart of the government's priming the pump is sent with a simple question: *How much* should the government *pay* its workers? There are only three possibilities.

(1) If it is a "low" wage, then wages are not sticky downward after all, nullifying Keynes' first assumption. The idea that the wages of civil servants are somehow less sticky than those in the free economy is not worth discussing. Any high-ranking official who tried to cut a subordinate bureaucrat's salary understands how difficult a task this is. Equally implausible is the claim that the market will not offer low-paying jobs. On the contrary, job creation goes on all the time, and most new jobs during a recession will be precisely low-paying.

(2) If it is a "high" wage, then again the taxpayers would be better off with those resources lying idle. There is nothing wrong with doing nothing if the alternative is losing money and making one's situation worse.

Even more important, high wages keep workers' expectations high, thereby prolonging the time until reality sets in in the minds of these newly minted government employees. People will be thinking the boom is still going on if the state pays high wages. Why lower one's expectations at *this* point? Stated differently, worker idleness is self-penalizing by depriving the worker of income. The worker feels the sting which serves as an incentive to him to find a new job. This undermines Keynes' second assumption: we must not really be in a depression if there is a boom in the "government industry."

At this point, a Keynesian surely will reply that the whole point of deficit spending is to prop up both aggregate consumer demand and wages. But this spending (a) substitutes government sovereignty for consumer sovereignty, thereby undermining capitalism still further (that is, beyond the beating the free market has already taken from artificially cheap credit), and (b) creates jobs that produce few benefits to the public. These are true, my hypothetical Keynesian will go on, but these offensive goings-on will persist only until the depression is over. Unfortunately, "the whole point" of a depression is to cleanse bad investments and with time reallocate resources to productive uses, not pile up new bad *public* investments on top of existing bad *private* ones. Keynes has no theory of resource allocation: resources for him are either "employed" or "unemployed," and no thought is given to the ideal that

resources be employed *correctly*, that is, in the best interests of the consumers.

We saw in (I, 21) that the multiplier fails to multiply. This is especially hopeless when the economy is a muddle after a boom and people are learning to be poor. Massive economic discoordination is part of what "bust" means, discoordination *that has no creative component but only the destructive one*. The idle resources in a recession are idle because they were misallocated during the preceding boom. They were used for purposes that the consumers did not authorize. The state should not interfere with the market's endeavors to redeploy them.

(3) Finally, if it is the "right" wage, then the government must have copied this wage by studying the private sector. This destroys Keynes' third assumption of unemployment that the market cannot alleviate. But even with a single one of his three assumptions gone, Keynes has no case.

48. … with (3) (more) easy money

This form of attempted depression cures merely injects into the patient more of the same poison that fell him in the first place. In a depression the demand for credit is low because numerous entrepreneurs have closed shop, because so many people are already in heavy debt, and because of general shell shock. The supply of credit is low too, first, because people hoard (i.e., abstain from buying bonds or stocks directly); second, because banks themselves, if fearful and given the uncertainty, may want to increase their reserves and retire some of their debt; they may also switch from lending to business to buying "safe" government debt. Quantity borrowed / invested declines. Enough inflation of fiat money by the Fed can probably reverse the depression for a short while, or it may not if the public gets suspicious that the central bank is manipulating the situation in such a crude fashion and forms inflationary expectations. Regardless, the amount of inflation sufficient to get lending started again may also be sufficient to ignite a hyperinflation in which case all bets are off. The economy will be harmed far beyond the limit to which the projected depression was imagined to harm it. And a depression should not be viewed as harmful anyway but as a natural if unpleasant process of self-recovery.

Paul Davidson (2009) has never seen an inflation he did not like. He is a believer in the idea that government deficit spending, financed by the central bank's buying government bonds, "can and will create profit opportunities and therefore induce business firms to expand output and employment" (66). For that reason he holds those who would have the Fed target a particular inflation rate in utter contempt. For sometimes aiming at such a target requires tightening of money and

credit. This depresses the economy and "endorses an incomes policy based on fear: of loss of jobs, sales revenues, and profits for firms that produce goods and services domestically" (77). The advocates of inflation targeting, Davidson explains, think that workers need to be shown their place in the scheme of things and so enjoy striking the fear of the Fed into them. To add injury to insult, the same elitists would abolish the "social safety net to protect the unemployed." These things Davidson calls "barbarous," "not very civilized actions" that bring about numerous "casualties of war" (78).

It is odd how Davidson describes "income inflation." His opinion is that the masses of common people have revolted against the "tyranny of the free market" (74). (An ugly phrase, to be sure. What's next, people rebelling against the freedoms permitted by a tyrannical government?) They demand higher and higher incomes without any concern for the welfare of the companies employing them and thus the common good. Surely, there is a limit to how high wages can get without destroying the economy. But the masses could not care less. Therefore, the Fed must put the squeeze on the economy and teach the workers a harsh lesson. Now as Mises (1996) points out, "where there are selfish interests pro, there must necessarily be selfish interests contra, too" (82). A worker may want to be paid as much as possible, but his employer wants to pay him as little as possible. Then there is competition among workers as much as competition among firms. If worker demands cause income inflation, then by the same logic must business demands cause income deflation? In the end, there are *negotiations*, bargaining. Davidson is talking nonsense.

There is no such thing as a "wage-price spiral" without actual money supply inflation (unless demand for money falls, but that will not cause a spiral either). A worker who asked to be paid more than he is worth would be unemployed. But given such inflation, there is no mystery. People's assets in terms of money increase which causes them to embark on spending sprees which causes heightened competition for consumer goods. Companies ration these goods by raising prices for them. … Finally, costs of factors of production such as incomes to labor catch up as business firms' futile attempts to expand bring this about. Of course, in the boom initiated by credit expansion wages and prices of the factors in the early stages of production rise first, long before the increase in the general price level. Some workers whose selling prices rise before their buying prices rise benefit at the expense of others. So some "costs" increase first, then demand, and finally all the other "costs."

What our author really wants to say is that his beloved money supply inflation causes price inflation including (eventually) inflation of wages. He seems vaguely uncomfortable with this. What is to be done?

Davidson proposes an "anti-inflation policy called TIP – a tax-based incomes policy." This is essentially a price control which will "penalize the largest domestic firms if they agreed to inflationary wage demands" (79) and therefore is as antisocial as government interventions (resorted to in order to "correct" the consequences of previous government interventions) get. (Do not the firms penalize themselves by paying higher wages?) This he judges to be not based on "fear" and hence presumably more humane. Happy are we therefore who are able to enjoy the benefits of money supply inflation (such as the aforementioned profit opportunities) without paying the costs of wage inflation.

We have distinguished between involuntary and cyclical unemployment. Perhaps Davidson thinks that the revolt has the form of wages being maintained, by means of private or governmental violence, at above-market levels throughout the economy. P in $MV = PQ$ is kept excessively high which results in a drop in Q. Institutional involuntary unemployment ensues. This profits neither the unemployed who are destitute nor even the employed because output declines.[34] Well, Davidson reasons, let's start the insanity. We cannot help it if the masses go bonkers. The most we can do is make the government benevolent and farsighted enough to counter the mad thrashing about of the mob with inflation, that is, by raising M. The obvious objection is that economists should teach the masses of people their common interests even, and especially, if their ideology is faulty. It is a betrayal of their vocation to be mere technicians of the state. For cyclical unemployment, its cause is precisely inflationary credit expansion. Were it not for the Fed's initiating the inflation, there would be no need for it to curb this inflation when its disastrous consequences come to the fore. Whether the money supply inflation is due to the government's desire to take advantage of the money illusion or to achieve Keynes' goal of low interest rates, price inflation is inevitable. Workers respond to the diminishing purchasing power of money and hence to falling real wages, sometimes reasonably, sometimes not, by asking for raises.

Inflation is not just *uneconomic* and contrary to the common good. It is *unjust* because the friends of the political class receive the new money first, while the rest of the people suffer higher prices. It is also *undemocratic* by imposing burdens on the citizens without any explicit design as by the legislature's tax policy. If that is what Davidson means by his claim that "free market" is marked by a "struggle over arbitrary and inequitable distribution of income" (80), and moreover by "institutional power struggle for higher incomes" (74), then I might concur. To imitate Mahatma Gandhi's quip, unfettered free market would be – in my opinion – a "good idea." But income under free enterprise tends to be "distributed" to each individual according to how

well he promotes the welfare of his fellow men in their capacity as consumers. Coming to own and enjoy private wealth is not (1) arbitrary because it reflects the size of one's prior contribution to other people's happiness, and it is not (2) inequitable if can be shown, as I believe it can, that each person *deserves* his income.

Both Keynes and Davidson recommend inflation, but Davidson in addition would have us hold down wages by government coercion and compulsion. What an original way to improve upon Keynes' holy writ. Naturally, this will prevent equilibration and create everlasting profits for the same entrepreneurs, an economically monstrous state of affairs. Keynes himself preferred *price* inflation to deflation, stable prices (whatever that means) to inflation, and abolishing interest and alleviating unemployment by means of *money supply* inflation to stable prices. Keynes adored money printing, and Davidson further suggests supplementing inflation (by means of credit expansion) in an attempt to lead the economy closer to full employment with wage controls.

It's true that consumer spending can generate "profit opportunities," but the caveat is that it must come *from the consumers*. We have seen that business losses are a market signal that something is very wrong. The underlying reality is poor allocation of precious scarce capital. Papering over this with fiat cash and more credit will continue to impoverish society. Perhaps the government can create profits by buying up the goods and burning them or distributing them through lottery. But it is hardly possible to come up with a more thorough "greatest misery for the greatest number" principle than that.

The solution is not to create temporary "economic activity" but to cause people to produce those things that are most urgently wanted by their fellow men, to cause no human effort to be *wasted* in pointless pursuits. It is an awkward expression that man "engages in economic activity" such as presumably buying and selling, rather in whatever *real* activity he does engage in he *economizes*. Rather than stimulating activity, inflation does the exact opposite of checking economizing and generating waste and inane hassle. Credit expansion causes decent people to be like those losers who never finish anything. For goodness' sake, even the Bible warns us about this sort of thing![35] The key is precisely to squeeze the most output and utility from the least amount of work and waiting. Human labor is a pious thing, a sacrifice for the sake of building something glorious, namely, a civilization, which we will not have as long as we are guided in economic theory and policy by Keynesianism.

Speaking of "arbitrary and inequitable distribution of wealth," I would question Davidson's interpretation of Keynes as believing that those are one of the "two flaws" of capitalism. (6) Where is Keynes' discourse on political philosophy? There are in both *Treatise on Money*

and *General Theory* few traces of any philosophy, let alone a defense of a proposition as ambitious as that. It's true that Keynes started out as a philosopher and had his "ideals," but he never published any systematic work defending his views. There is Keynesian economics, such as it is, but no Keynesian philosophy (or even sociology), the way, say, there is Rawlsian philosophy, Rothbardian philosophy, or Marxist philosophy. But these are different issues altogether.

(More) easy money in a depression would be catastrophic for the economy. The monetary and fiscal policies will be further considered in Part II.

49. That a "stamped money" policy is ineffective

On p. 357 of *General Theory* Keynes mentions the plan of stamping money in order to drive down interest rates for the second time. "According to this proposal, currency notes… would only retain their value by being stamped each month, like an insurance card, with stamps purchased at a post office." Notice how delivery of mail, a former commanding height of society, when controlled by the state, encourages reformers to dream of using it in their totalitarian schemes. Keynes ultimately rejects the idea because, he feels, there will be massive individual resistance to this program and evasion. He fails to realize that the idea is completely untenable on its own terms.

If there is inflation that is expected, that is, negative a in Keynes' terms, then people will prefer consuming to both lending and hoarding, lowering the supply of loans, and they will also be more eager to borrow, increasing the demand. Hence the nominal interest rate will rise. Under stamped cash, money has carrying costs, $-c$ which means that people prefer consuming and lending to hoarding which increases V, and borrowers will be less apt to borrow and hoard. At first the interest rate will fall. But for it to fall permanently requires that Keynes' liquidity theory of interest be true, and it is not. As we know, dishoarding will raise income and price level. The former will up the supply, the latter the demand, with the result that the interest rate will be unaffected. Keynes writes that Irving Fisher favored this scheme, but Fisher advocated "stamp scrip" not for the sake of lowering the interest rate but in order to repair PL (or monetary) disequilibrium during the Great Depression by increasing MV.

Another problem is that saving is not identical to hoarding, and one may accumulate a cash balance simply as part of saving to buy definite expensive goods such as by starting a business. As we have seen, when one saves over a long period of time, production is ipso facto redirected from making consumer goods to making expensive capital

goods which increase the marginal productivity of labor. If money savings cannot be accumulated, then neither can real capital goods. Saving, aside from the amount that can be saved in a week, will be strongly discouraged, and long-term savings, dissipated.

Suppose in fact that all transactions are conducted with cash only and avoiding the government-induced depreciation of cash is somehow impossible. For illustration purposes, let's consider a stamp tax of 20% of the value of cash held per week payable to the government's Post Office. Perhaps Keynes has in mind something like the following. Suppose that Smith needs to pay rent equal to $500 a week from now. It pays him in this case to loan $556 to Jones for exactly a week at –10% if it will be Jones (or someone down the line) on whom paying the stamp tax will fall. Instead of losing $100 by keeping the money under the mattress, a week from now Smith will have lost only $56. Voila, zero or negative interest rates! This might work when money is demanded to "bridge the interval between the receipt of income and its disbursement" (*GT*: 195). More plausibly, instead of lending at a negative interest rate, one would simply spend the money. Indeed, that is why negative nominal interest rates are impossible. They would no longer present one with a choice between consuming "less" now vs. "more" in the future, but on the contrary consuming "more" now as opposed to "less" in the future, and this is an easy choice.

A different interpretation of this idea is that it is supposed to dissolve hoards and redirect the money that would have been hoarded into consumption and investment in order to raise aggregate demand. Every banknote might have an electronic clock and value on it such that every week the value would drop by 20% unless the note is exchanged for a consumer or producer good or service. Then the value would reset to its original number, and the clock would reset to zero, allowing the new owner a week to keep the note before it lost value for the first time again. Perhaps the banknotes would be able to read minds such that if one saves for the purpose of buying an expensive consumer good or starting a business, then the note will not depreciate, but it will lose value if he saves for reasons of security-seeking. Disregard the practical unworkability of this scheme. What is interesting is that it will result in a business cycle.

The purpose of accumulating hoards is to secure oneself against an uncertain future. People who hoard are afraid to invest even though holding money does not even earn interest for them. Their confidence is low. But the government forces them either to consume or to invest. Since a consumer good is less likely to be liquid than a security, investing is the only way to maintain the semblance of liquidity. Unfortunately, the kind of people who now invest more are the marginal cowards. They are deathly afraid but have no choice. But again, fear is a

burden that dampens or negates one's entrepreneurial agility. If one is unsure of himself and quaking in his boots, then he has no business competing with the more confident. These fearful individuals will likely lose and fail in their businesses. The result is again mass losses and a bust and recession. Thus, a business cycle can occur not only due to failures of prudence but due to failures of courage, as well. Now to be sure, in public companies there prevails a partial separation of ownership and control. One may invest, and his own fear may be irrelevant to the success of the enterprise. However, he may choose to invest in the most conservative businesses, yet a business must either grow or shrink, it is almost impossible for it to evenly rotate for any significant period of time. In other words, a shareholder is an entrepreneur insofar as he, uncertainly, chooses a CEO who will act on his behalf as though giving him a power of attorney. Some investments will be in personal businesses. Regardless, there will be more fear in the economy.

We can bring the futures market to bear as an analogy to the loan market in the standard Austrian business cycle theory. The futures speculators are deceived about the "equilibrium" confidence rate. They observe increased investment and consumption and lessened hoarding and figure that people's confidence rates are higher than they really are. When making futures contracts, they offer higher prices to sellers of commodities (e.g., farmers) despite the fact that those sellers are scared of their own shadows and would actually accept a pittance in order to be relieved of their worries.

If a speculator predicts the future prices incorrectly, then he will always take a loss because the seller will buy cheap elsewhere on the market and sell dear to the speculator according to the contract. If he predicts correctly, then his profit margins are already low because of the illusion of high confidence. In addition, numerous "cowards" will both fail to deliver when the time comes and claim to have no money to deliver by buying on the market and reselling to the speculator. They will declare bankruptcy. This will lead to losses to the speculators overall. Fortunately, the speculators are not fractional-reserve, they are not deeply overextended and unbecomingly fragile. But there will be a cluster of entrepreneurial errors among these businessmen, nevertheless.

Fiscal policy can have a similar effect. Given that tax reforms are rare and deficit spending is easy, fiscal policy is usually conducted by means of borrowing and spending. The point is to borrow from hoards, not from the money that would otherwise be consumed or invested since that would simply crowd out private spending. The percentage of cash balances held as a store of value diminishes, raising the apparent confidence rate. It remains to be seen how important this reason is as a cause of business cycles. In the United States, for example, fiscal policy

is viewed with more suspicion than monetary policy. The Fed is idolized and supported as an essential institution, providing "opportunity" to the "little guy" by showering that guy with credit, whereas the government is more limited in its ability to tax and spend.

The increase in V is not costless because people would not have wanted to spend without the tax. Like all taxes, the stamp tax is a violent imposition. And since it doesn't even accomplish what it sets out to do, lower interest rates, we must demur to Keynes' calling this preposterous design "sound."

Notes

1. There might not, strictly speaking, be such thing as frictional unemployment if searching for a job is itself productive work. A person looking for work is essentially a self-employed entrepreneur who is admirably busy attempting to find customers for his skills.

2. In one kind of illusion, prices rise and money wages stay the same with workers thinking that their real wages are unchanged. This allows entrepreneurs to hire more labor and increase output. In another kind, both prices and money wages rise, but workers think that their real wages rise. They falsely imagine higher demand for their labor, and as a result quantity supplied of labor and output increase. (In fact, the mistake shifts the supply curve to the right.)

3. Leijonhufvud (1968) writes that in order to "get from the Classical to Keynes' Theory of Markets" with inflexible prices we need the idea that "the *information* needed to coordinate economic activities in large systems where decision-making is decentralized is seen to take time and to involve economic costs" (38). This is funny considering that the word "information" is not found anywhere in *General Theory*. It's one thing to like Keynes' assumptions and conclusions, quite another to defend them with arguments that have no connection to Keynes' own. It is safe to say that Keynes knew very little if anything about "cybernetics."

4. This is really outrageous. Capitalism, whose very essence is dynamism and progress, was accused by some Keynesians and Marxists of a tendency toward "stagnation," that it should come to this! Truly, Schumpeter (2008) was right in saying that "capitalism stands its trial before judges who have the sentence of death in their pockets. They are going to pass it, whatever the defense they may hear; the only success victorious defense can possibly produce is a change in the indictment." (144) They're the wolf in the fable, and capitalism is the lamb.

5. This refutes the idea that "a quasi-equilibrium would result… in which output would remain constant but the price level would fall at… an ever-increasing rate as workers become frantic. … the economy could not continue to function as a currency-using system." (Littleboy 1990: 279)

6. While unions are generally a pernicious influence on the economy, it's true, as Keynes argued, that "labor is not more truculent in a depression than in a boom" (*GT*: 9), and that includes both unions and individuals. But it is only a depression, not a boom, that is characterized by the need for significant price adjustments which can stall if prices cannot fall.

7. "Classical economists recognized the existence of 'hoarding' but believed it occurred only in moments of panic," says Skidelsky (2010: 76). Actually, "classical" economists were right.

8. E.g., contra Leijonhufvud (1973), rejecting the auctioneer as the coordinating device does not entail any "coordination failures" or "effective demand failures" in the free market.

9. Brian Loasby (1976) quotes H.A. Simon: "Nor does creativity flourish in completely unstructured situations. The almost unanimous testimony of creative artists and scientists is that the first task is to impose limits on the situation if the limits are not already given." (4) Economic creative advance too must take place by shaking up, but not abolishing, equilibrium.

10. Uncertainty for *entrepreneurs* poses no obstacles to our knowledge of *economics*.

11. E.g., "workers would rather quit and engage in job search because they possess inelastic expectations regarding their money wage" (51). But no one quits his job and *then* begins searching for a new one, any more than one leaves his old apartment and then, while homeless, starts looking for a new place. If one is dissatisfied with his wage, he searches for a new job, or goes to school if he seeks to change careers, while continuing to work at the old one.

12. Ammous (2018) adds coincidence of "time frames" in terms of the difficulty of accumulating enough perishable goods to pay for a nonperishable good and coincidence of "locations" for goods like houses which cannot be delivered: not only must the other party to the direct exchange want a house, but he must want the house at the exact location one's house is at.

13. Skidelsky (2009) writes: "His success in business gave Keynes authority to pronounce on economic issues. Practical men respect theorists who show they can make money." (60) Sorry, it doesn't work that way.

14. For a discussion of social costs of inflation (and hence its clear non-neutrality) see Yeager 1997: 34-40.

15. E.g., Ammous (2018) mentions the enormous foreign exchange market, an extremely costly attempt by the market to deal with international barter among fiat currencies.

16. St. Thomas describes the disutility of waiting of, of all things, souls in purgatory as

follows: “And since after this life the holy souls desire the Sovereign Good with the most intense longing – both because their longing is not held back by the weight of the body, and because, had there been no obstacle, they would already have gained the goal of enjoying the Sovereign Good – it follows that they grieve exceedingly for their delay.” (*ST*: Supplement, Appendix I, 2, 1) The disutility of waiting is less pain of sense than pain of loss.

17. This is crudely put, to be sure. Philosopher Victor Reppert once quipped: “Sometimes, when people talk about what the brain does, I want to say: ‘Interesting fellow, Mr. Brain. Remarkable what he can do.’” The *brain* transmits *chemicals*, the *mind*, or the will, feels fear.

18. Even largely specific goods can burden the planner. Hayek (1948) points out that for a perfectly specific good, “if it is at all durable and may be used up either more or less rapidly, its wear and tear must be counted as true cost if the appropriate volume of production at any one moment is to be rationally determined. This is true not only because its possible services in the future have to be compared with the results of a more intensive use at present but also because, while it exists, it saves the services of some other factor which would be needed to replace it and which can meanwhile be used for other purposes.” (168-9)

19. The loops present no serious difficulty since what matters is, given the capital goods available on the market at any given time, how long, and at what expense, it will take an entrepreneur to produce some future consumer good. If it takes 1 week to produce lumber given an axe and 2 weeks to produce an axe given lumber, and we have an axe but no lumber, then the total period of production of a new axe is 3 weeks. The period of production of the old axe does not count since past sacrifices are bygones. The old axe is a higher-order good than the lumber which in turn is higher than the new axe. Or again, the old axe is higher than the still to-be-produced lumber, and the old lumber is higher than the still to-be-produced axe.

20. See Rothbard 2004: 369; 519.

21. Instead of this arrogant anti-laissez-faire slogan, would it not be better to use the tried and true “the bigger they are, the harder they fall”? The Soviet Union too was thought too big to fail, an idea at least as offensive as that “socialism is inevitable,” and it was vastly better armed than our pathetic financial companies. Yet now it is gone, and the world is a better place for it.

22. The consumers “are merciless bosses, full of whims and fancies, changeable and unpredictable. For them nothing counts other than their own satisfaction. They do not care a whit for past merit and vested interests. If something is offered to them that they like better or that is cheaper, they desert their old purveyors.” (Mises 1996: 270)

23. We can fold FRB into general interventionism by casting it as unjust and uneconomic government *privileges* to banks. Here “intervention” can be understood as any deviation of actual positive law from either natural law or utilitarian (i.e., promoting the common good) positive law.

24. Estey (1956) interprets the Schumpeterian bust as follows: “When the period of gestation of over, the output of consumers’ goods will be enlarged once more, and, because of the innovation, to a level above that which ruled before. The work is done; the consequences of an innovation are here; the expansion is checked; prosperity comes to an end.” (147) But the two sentences contradict each other: prosperity just *is* enlarged output of consumer goods.

25. “[W]e must call the boom retrogression and the depression progress. The boom squanders through malinvestment scarce factors of production and reduces the stock available through overconsumption; its alleged blessings are paid for by impoverishment. The depression, on the other hand, is the way back to a state of affairs in which all factors of production are employed for the best possible satisfaction of the most urgent needs of the consumers.” (Mises 1996: 575)

26. Interest rates will rise even if prices do not rise because of real economic growth. Production will involve more goods all around, which still puts an upward pressure on the demand for credit.

27. Inflationary expectations, like all expectations, aim at the truth but need not be true; the Fed may up and reverse its policy, stymieing the people. The point is merely that if the Fed is *publicly* committed to keeping interest rates low, then sooner or later people will begin to expect inflation.

28. Fractional-reserve banks can profit in an inflation even at low interest rates because they lend money that doesn’t belong to them. But their depositors can’t and so will either spend their cash or invest it directly, thus depriving the banks of the base money on which to pyramid credit.

29. There is the potential problem of maturity mismatch for time accounts. I might buy a CD from the bank for 12 months, and the bank relends this money for 2 years, and 12 months later I decide to get my money back. There is nothing unlawful about this: for the first 12 months the money fully belongs to the bank which can do with it as it pleases. A remedy is for the bank to have some uninvested cash on hand as its money capital to handle this sort of issue. Or it can sell some of its investments to generate cash to pay off its obligations. Either way, no new money is created, and no business cycle is instigated.

30. Unlike hoarding, dishoarding can result in short-run redistribution of wealth, in this case from workers to entrepreneurs. Therefore, real production and consumption patterns can change even in the long run and even under the most favorable circumstances.

31. Yeager (1997) absurdly finds even “growing demand for nominal cash balances associated with growth in population, productivity, and real economic activity” problematic (257). But an increase in wealth and prosperity is at least not a *monetary* disequilibrium. An increase in Q causes changes in *relative* prices, and only through those the absolute price level.

32. When the price of pork falls, it will be the pork consumers who will get the incentive to dig for gold. As prices fall one after another, more and more people will seek to mine. Government attempts at stabilization, on the other hand, are much less fine-grained because the authority will need to monitor some official index number rather than respond to each change in individual prices. Regarding the "diversion" of labor to gold mining, Keynes writes that "for the world as a whole the maximum diversion in this way is almost negligible" (*GT*: 231). Nevertheless, it is sufficient to repair PL disequilibria under normal or healthy conditions.

33. Yeager (1997) considers monetary disequilibrium to be the cause of depressions but does not explain what causes (severe) monetary disequilibrium. The Austrian business cycle theory does.

34. It may be possible, by excluding some people from social cooperation, to increase the marginal productivity of the remaining workers in the short run. But in the longer run, as the capital invested is unmaintained and depreciates, productivity goes back down. In addition, division of labor becomes less intensive, and everyone ends up poorer.

35. "Which of you wishing to construct a tower does not first sit down and calculate the cost to see if there is enough for its completion? Otherwise, after laying the foundation and finding himself unable to finish the work the onlookers should laugh at him and say, 'This one began to build but did not have the resources to finish.'" (Lk 14:28-30)

Part II: Keynesians

1. That the Fed can target price level or interest rates

It is useful to distinguish between commodity money, fiat money, and credit money. Under "sound money," that is, at least a noninflationary gold standard, the supply of money is vertical or can be usefully represented as such especially because an increase in this supply confers no social benefits, it only dilutes the purchasing power of money. This means that the supply of money is or can with reason be assumed to be perfectly scarce: the quantity of money supplied cannot increase or decrease such as in response to changing demand for money. In real life, higher demand for money, if money is made from gold, will make gold mining more profitable and increase the quantity supplied. A decrease in the demand for money may decrease quantity if coins experience wear and tear with time, or if coins are melted so that the gold can be used elsewhere.

Under a fiat money regime, on the other hand, money is not only not perfectly scarce but in fact superabundant because the cost of printing a banknote is low, and the cost of printing a $1 bill is the same as the cost of printing a $1 trillion bill; likewise, it does not cost the central bank anything extra to increase a commercial bank's account balance in its computer by $1 trillion rather than by $1. Now if the monetary authority believed that this superabundance was a boon to society, then it would print googols of cash and distribute it among the populace. Of course, that would destroy the system of indirect exchange altogether and be a catastrophe rather than a blessing. Consequently, the money supply is made scarce artificially. The people are prohibited from "counterfeiting," and a central bank is appointed to watch over the money supply. Since the central bank is at liberty to increase bank reserves in any way it pleases, it itself must have a rule according to which it will create money. Otherwise, the bank chairman might simply print a ton of cash and give it to his golfing buddies, thereby making them very rich and everyone else very poor.

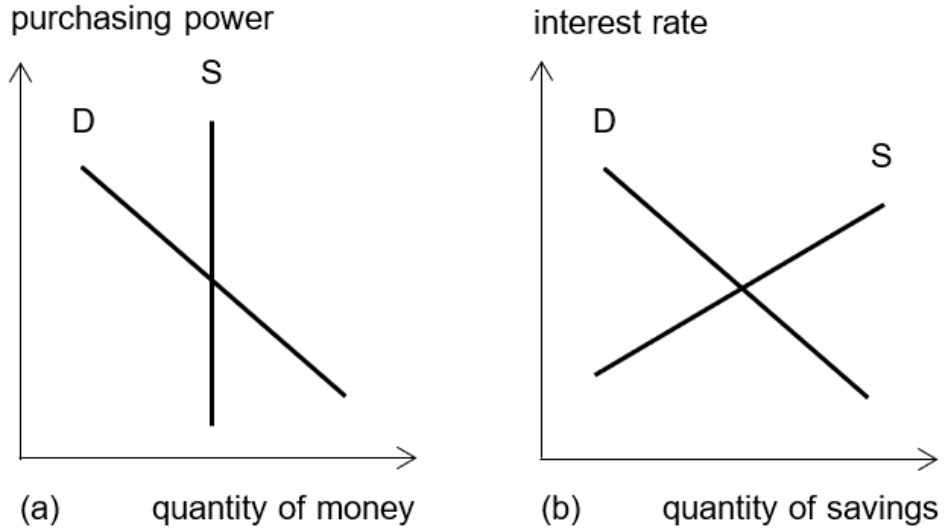

Figure II.1.1. Supply of and demand for (a) money, (b) loans.

Figure II.1.1 shows the graph of the supply of and demand for money in (a) and the graph of the supply of and demand for loans in (b). The demand curve in (a) is the *total demand to hold cash*, $Q_{od} + Q_d + Q_{os} - Q_s = M + (Q_d - Q_s)$, where $Q_{od} + Q_{os}$ (quantity originally held by the demanders + quantity originally held by the suppliers) $= M$, Q_d is quantity demanded, and Q_s is quantity supplied. The *total supply of cash to be held* is constant M and a vertical line graphically. Above the equilibrium there is a surplus of money: the purchasing power is too high, people want to hold less than the total money stock. They disgorge cash and spend, in so doing raising the price level and lowering the purchasing power of money. Below the equilibrium there is a shortage of money: people are demanding to hold more than is available. They spend less, and as a result entrepreneurs lower their prices in order to give the public an incentive to buy which initiates a movement of the purchasing power of money upward toward equilibrium.

(b) is demand for and supply of *savings* or present goods in exchange for future goods, the market for loanable funds. It features an upward sloping supply curve, implying that people will save and lend more at higher interest rates. This is because the higher the rate, the greater the opportunity cost of consuming or hoarding a marginal dollar. The quantity demanded / supplied is only that subset of the total money stock which people want to exchange intertemporally. We have seen that what is sold on the loan market is instant gratification. High demand for money can coexist with a preference to forgo immediate consumption for the sake of an even greater payoff in the future.

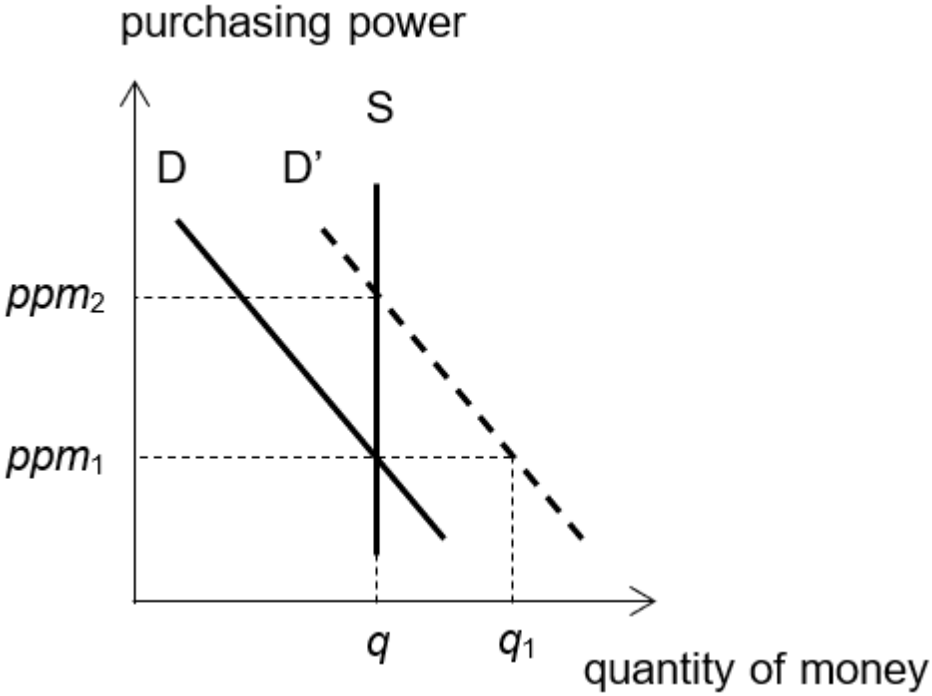

Figure II.1.2. Change in the demand for money.

In Figure II.1.2 if demand for money goes up from D to D', then the situation is as if people wanted to hold in their cash balances more money than before. Unfortunately, the quantity supplied remains the same. Therefore, instead of having $\$q_1$ of money with the same purchasing power as before, namely, equal to ppm_1, the public will have to be content with the same amount of money q but of higher-powered money with greater purchasing power equal to ppm_2. The same amount of money will do "more work" and be able to buy more things.

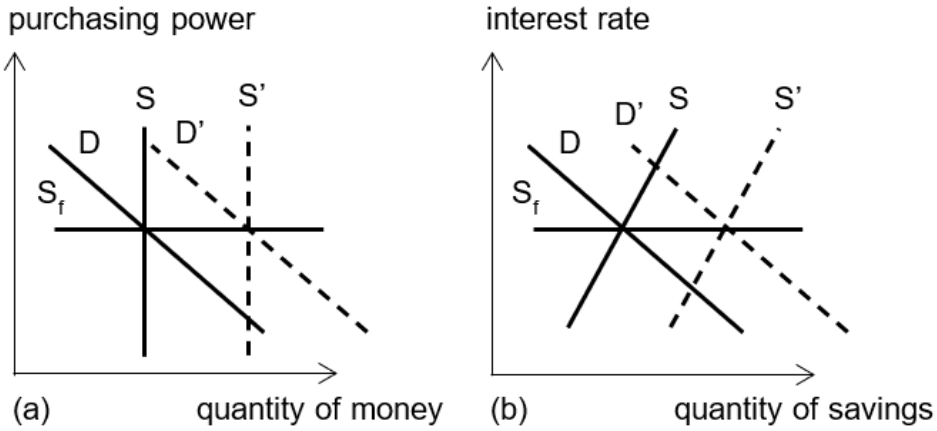

Figure II.1.3. Horizontal money and loans supply curves.

The graphs in Figure II.1.1 would be perfectly correct under sound money. But under fiat money these graphs look rather differently. This is because the central bank's policy has usually been either (1) stable prices (as per monetarism) or (2) low interest rates (as per the Keynesian contempt for interest as such). If it is the former, then the supply of money curve in (a) is no longer vertical or even upward sloping but perfectly horizontal. This means that if the demand for money changes, such as from D to D' in Figure II.1.3(a), then the monetary authority will adjust the money supply from S to S' in such a way as to preserve the purchasing power of money, resulting in curve S_f. Since the tendency under the free market is toward mild price deflation due to stability of the money supply and economic progress (unless counteracted by the mining of precious metals), the government might be able to maintain "stable prices," meaningless though this target is, by inflating a little bit every year just as monetarism prescribes. This is a long-run result only. Of course, insofar as the new money enters the economy via bank credit expansion, this policy will generate business cycles. This can work in theory, though in practice the Fed inflates like there is no tomorrow. If it is the latter, that is, if the central bank "targets" the interest rates, then the supply curve in (b) is horizontal because if the demand for savings changes, then the Fed will so alter the reserves of the commercial banks that, when the banks pyramid new credit on top of these reserves, the equilibrium interest rate remains the same. This *doesn't* work even in theory since interest rates cannot be kept permanently low.

Now the lessons of the normal graphs in Figure II.1.1 are not lost on the central planners; for example, the bank knows very well that an increase in the demand for money will raise the money's purchasing power, and an increase in the supply of money will lower it. So, the supply curve is horizontal in Figure II.1.3(a) because of a government artifice, because the central bank is not a market institution. The central bank could not exist unless commissioned, licensed, and protected by the state. In the U.S., the government enables the Federal Reserve to exist by granting it the power to create money and serve as lender of last, or not-so-last as the case may be, resort to fractional-reserve banks, enforcing legal tender laws, and prohibiting private counterfeiting. If the federal government did the job that its founders assigned to it, then the Fed, even if it was still around, would collapse in a matter of days. Good money would quickly displace bad, as good everything on the free market outcompetes bad everything, and this cartel of banks would fall apart.

Both targets are arbitrary and protect no intrinsic good. There is nothing important about the preservation of status quo prices or interest

rates. On the contrary, those must adjust in sync with the public's preferences; maintaining them is tantamount to price controls and is detrimental to the commonweal. As a practical issue, the central bank is rarely independent of politics. Cheap credit is always popular which is why the Fed's "targets" are seldom adhered to.

The exposition so far has described the differences between (1) commodity money and (2) fiat money. (3) Credit money is something that is added onto these, representing the creation and destruction of money by commercial banks facilitated by their fractional reserves. It is so called because it is created in the process of being lent to someone at interest. As a result, it's hard for the Fed to control the money supply given that banks themselves create and destroy money (with their borrowers' help) at will. For that reason alone monetarism as policy is problematic. Money then is partly "exogenous" in its fiat form, and partly "endogenous" in its credit form. We saw that excess supply of money should lead to a higher equilibrium price level. Nicholas Kaldor (1982) makes an astonishing objection: "… with credit-money this kind of problem *cannot* arise, since credit-money comes into existence as a result of borrowing… from the banks; if, as a result of such borrowing, more money comes into existence than the public at the given level of incomes (or expenditures) wishes to hold, the excess gets directly or indirectly repaid to the banks and in this way the 'excess money' is extinguished." (70) It doesn't work that way! Excess supply means that people want to get rid of their money by *spending* it, in the process bidding up the prices of all goods, not *destroying* it. We can thus make two distinctions: hard (commodity) vs. easy (fiat) money and dear (100%-reserve banking) vs. cheap (credit expansion) money. These are independent of each other: we could have hard cheap money or easy dear money. Keynes was a proponent of cheap money, thinking that it was necessary and often sufficient for prosperity and full employment. Unfortunately, (a) cheap money results in a business cycle which *diminishes* prosperity and employment overall vs. dear money which is on the contrary utilitarian. (b) It is *impossible* to keep interest rates down in the long run anyway. The price of "money" should be determined by the people in their capacity as consumers, investors, and hoarders.

(1) alone is normal honest banking, abandoned long ago.

(1) + (3) is called free banking, and Rothbard (2008), for example, believed that it was a workable system which would naturally resolve into something close to (1) alone. Rothbard thinks that a crucial restraint on inflation under free banking is "the limited clientele of each bank." In the limiting case of only a single client per bank, "there would be no room whatever for any fractional reserve credit. For the borrowing client would immediately spend the money on somebody who would by definition be a client of another bank." (119) Against this

opinion I must object. Central banking (a) sets the reserve requirements for commercial banks, (b) controls the fiat reserve money (e.g., through the FOMC), and (c) lends to banks in trouble through the discount window. However, the Fed only helps to forestall bank runs; the "limited clientele" of each bank remains and has no effect on the extent of bank-generated inflation, being a background condition of the economy both under free and central banking. In both systems, credit is expanded up to the money multiplier. In addition, the reserves that bank *A* loses to bank *B* may well come back to it from bank *C*. The total reserves are unchanged, no matter where the gold flows. Even without the central bank, commercial banks would be able to borrow on the free banking version of the federal funds market.

(2) + (3) is modern banking.

(1) + (2) is impossible due to Gresham's law.

(3) alone makes no sense because banks must have *some* reserves brought in by their customers.

(2) alone presents a fascinating case. There is nothing theoretically impossible about it. We could have fiat paper money with 100%-reserve banking. Fisher (1936) favored this solution. Rothbard presented his "case for a 100% gold dollar." But in our current situation even a 100% fiat dollar would be a huge improvement. Fisher was obsessed with stabilizing the purchasing power of the dollar, he objected even to the mild price deflation resulting from economic growth. In order to act for this end, his Currency Commission would have to continue to create new money. Which assets would it have to buy? If government bonds, then ideally the government has no debt and balances its budget. If corporate bonds, why should the government own private companies? Why not democratize money creation instead by letting the people coin their own currency out of whatever substance the market deems best? 100% fiat dollar is only 50% correct and is not a practicable sound money because the government will inevitably abuse it. Sound money will yield, as a side effect, a stable price level; fiat money managed by the state ostensibly for the explicit purpose of price stability will, upon any pretext or crisis, end in inflation. Fisher's partial solution was, however, an excellent attempt. What makes this proposal difficult is that the government profits from low interest rates too as they help to monetize its debt. In addition, the masses are in thrall to the inflationist ideology. The people do not rebel over such oppression as inflation, periodic economic crises, the enormous government debt and deficits impose on them because they think that they benefit from (2) + (3), as well. They are mistaken, but the illusion has proved hard to shake: the booms seem to justify the busts, goodness only knows why. These exhaust all possibilities.

Our age is no more and perhaps much less depraved than any

other age, but each age is depraved in its own unique way. The chaos of our monetary system is *our* way of being wicked. It is as if we almost revel in the perversion of the quasi-abundance of easy and cheap money. We are shameless: "You want cash? We'll print some for you." We enjoy being untrammeled by any responsibility despite our knowledge that our behavior is self-destructive. We have blithely prostituted our financial health and honor for the sake of a few fleeting thrills.

2. That Keynesians love saving too much in a boom and too little in a bust

Consider two out of the three reasons for saving: investing and hoarding. Recall (1) Keynes' abhorrence of high interest rates. Credit expansion, and with it forced savings, is justified precisely on the grounds that it would eliminate the scarcity of capital goods. Instead they only produce business cycles and general impoverishment. Who could have imagined that disregarding people's preferences and shoving "economic growth" down their throats against their will could do harm to the economy as a whole? Thus, Keynesians love savings so much that they would shower the world with cash in order for it to be *invested*. In a bust, when resource misallocations – as judged by the consumers – are revealed, Keynesians cannot help stopping worrying about investing and become deeply concerned about *hoarding*. This they absolutely hate; remember further (2) Keynes' animosity toward "liquidity preference" or the demand for goods or cash balances as stores of value. Of all commodities, money, being perfectly liquid, fulfills this function to the highest degree and is promptly excoriated for doing just that. (Keynes likes to see to it that no good deed, like the invention of a medium of exchange, goes unpunished.) Thus, they prescribe artificially induced investing to start a boom and artificially induced spending of any kind to avoid the inevitable recession.

It all comes down to the fact that voluntary savings, whether for the purposes of investing or hoarding are, in the Keynesian world, fundamentally *bad*. To fix the alleged market failure, the government uses two "instruments" or "tools": monetary policy and fiscal policy. Monetary policy, i.e., inflationary credit expansion, is unleashed when savings are *consumed* in order to generate the funds to be invested instead. That is what the government does to ensure that savings are invested poorly. The monetary policy aims at increasing the "marginal efficiency of capital" via lowering of interest rates in order to induce investment. Fiscal policy, i.e., deficit spending or borrowing and spending, is unleashed when savings are *hoarded*. That is what the government does to ensure that savings fail to supply the needed

security for the public. (Again, hoarding both has utility for the saver, namely, to reduce the perceived threat of future dangers, and serves a social purpose because as a side effect it brings about lower prices for those who instead choose to consume or invest. Such people ought to love hoarders who produce much but consume little.) The fiscal policy is aimed at increasing the "propensity to consume."

Together the policies seek to raise aggregate demand. In other words, Keynesians think that there is lack of "full" investment for two reasons: from below, so to speak, because of high interest rates, and from above, because of volatility of the animal spirits, investor nervousness, lack of confidence, and suchlike psychological reasons. The monetary policy tinkers with the lower limit by boosting initial investment into the *first* round of production; the fiscal policy works with the upper limit by letting the entrepreneurs profit in the same round by government deficit spending on their output. When properly used, these policies are supposed to ensure full employment in *every* round of production.

Fiscal policy can in principle both (1a) borrow and spend in order to keep prices high and (1b) tax and hoard in order to accelerate price deflation. Monetary policy can both (2a) lower the interest rate to stimulate investment and (2b) tighten in order to prevent over- and malinvestment. Keynes is fully committed to both to both (1a) and (2a): "There is room… to promote investment and, at the same time, to promote consumption, not merely to the level which with the existing propensity to consume would correspond to the increased investment, but to a higher level still." (*GT*: 325) The monetary policy promotes investment without sacrificing consumption, and the fiscal policy promotes consumption at the expense of hoarding, or try to. Unfortunately, there is no such thing as a free lunch. We cannot get something from nothing.

Keynes may be interpreted both as (1) a Keynesian and as a "Fabian" socialist who sought to diminish "uncertainty" by having the government take over the (2) direction of investment, (3) volume of investment, or both.

For example, (1') Keynes finds himself "somewhat skeptical of the success of a merely monetary policy directed towards influencing the rate of interest" (*GT*: 164). "It seems unlikely that the influence of banking policy on the rate of interest will be sufficient by itself to determine an optimum rate of investment." (378) Using the monetary policy, even the "most enlightened," is "dangerously and unnecessarily defeatist. It recommends, or at least assumes, for permanent acceptance too much that is defective in our existing economic scheme." (327) On the other hand, there is no evidence that Keynes considered investment to be "interest-inelastic," such as when wild animal spirits cause

entrepreneurs to ignore all considerations of interest rates. (Are they supposed to ignore *other* costs, too?) Tily (2010) argues (and I agree) that Keynes was a fanatical monetary crank who extolled the virtues of cheap money and sought to lower interest rates through massive credit expansions, and Hall (1990) suggests that Keynes' reticence about the monetary policy was rooted not in principle or theory but merely in his distrust of the actual central banks of his time. It's safe to say that Keynes considered monetary policy to be important but also a concession to laissez faire, mere interventionism as opposed to the tougher-minded fascism that he ultimately favored.

(2') Keynes writes: "I see no reason to suppose that the existing system seriously misemploys the factors of production which are in use." (379) On the other hand, he concludes that "the duty of ordering the current volume of investment cannot safely be left in private hands" (320). The phrase "in use" suggests that Keynes thought that the state should choose where to invest, and private enterprise can then manage the investment. This of course is self-contradictory: without the freedom to determine the future course of production, specifically where and how to deploy capital, the market ceases to exist.

(3') Keynes goes on: "It is in determining the volume, not the direction, of actual employment that the existing system has broken down." (379) He never explains, however, how the state is supposed to be able to manipulate the volume of employment / investment without resorting either to monetary policy or to socializing the direction of investment. Keynes has no understanding of the differences between capitalism and socialism other than that in the capitalist world there is in some sense more undesirable "uncertainty."

The reason for the confusion is that the monetary and fiscal policies have both interventionist and socialist aspects. *Monetary* policy bamboozles the entrepreneurs, causing them to embark on antisocial production endeavors but still relies on the market to produce. However, it also allows the Fed, in creating money at will, theoretically to buy every private business, nationalizing everything. Rothbard wrote humorously that the U.S. federal government's foreign policy brought to its logical conclusion would entail "invading the world." It is to be hoped that its monetary policy is not going to be brought to such a conclusion, namely, to buy up the world. *Fiscal* policy prevents those antisocial endeavors from going belly-up after their frivolousness has been exposed, again keeping resources misallocated but again also within the market. At the same time, it has the potential completely to subvert consumer sovereignty by transferring all purchasing power from the people to the state.

Keynes suggests that "an open-market monetary policy is [not] capable, unaided" of achieving full employment (267). Since socialism is

a *replacement* for monetary policy, the "aid" to it can logically only be fiscal policy. Further, he acknowledges "force in the argument that a high rate of interest is much more effective against a boom than a low rate of interest against a slump." But he qualifies this by saying that a slump may be resisted by "taking drastic steps, by redistributing incomes or otherwise, to stimulate the propensity to consume" (321). This is just another way of referring to fiscal policy.

These then are the "tools" with which the government mismanages the economy. I am not criticizing any particular ways in which the "tools" are used but rather the fact that they are used at all, rather than having privately minted dear and hard money establish both the interest rate (the market's "monetary policy") and the purchasing power of money (the market's "fiscal policy") naturally via laissez faire. The famous tools turn out to be too primitive to plan the economy successfully. There is no such thing as "fine-tuning" the economy; any tuning is bound to be extremely coarse.

3. That markets do not fail

The free economy, says Keynes, is flawed in two ways. First of all, it is plagued by perpetually high interest rates. As a matter of fact, for Keynes, there is no rate of interest that is low enough; in order to satisfy him this rate has to be zero. This causes the economic system to

> remain in a chronic condition of sub-normal activity for a considerable period without any marked tendency either towards recovery or towards complete collapse. Moreover…, full, or even approximately full, employment is of rare and short-lived occurrence. … an intermediate situation which is neither desperate nor satisfactory is our normal lot.
>
> … we oscillate, avoiding the gravest extremes of fluctuations in employment and in prices in both directions, round an intermediate position appreciably below full employment and appreciably above the minimum employment a decline below which would endanger life. (*GT*: 249ff)

In other words, the *secular* direction of the economy under laissez faire is barely adequate. On top of that, there is also the exhausting business cycle and *cyclical* unemployment and depression which rotate around this already poorly performing economy. The argument above is that laissez faire delivers the goods better than any alternative, but government interventionism and corrupt banking practices foster the cyclical boom-bust nightmare which can be corrected by still more laissez faire including by enforcement of rights to property.

Keynesians would have none of that. As far as they are

concerned, business cycles are inbuilt into the free enterprise system, and the government must manage them carefully. Moreover, the free economy as a whole and in the long term, when left alone, underperforms as compared to an interventionist economy. Laissez faire, therefore, fails twice, according to Keynes and his students: it grows slowly due to artificial scarcity of capital created by above-zero interest rates, and it is manic-depressive by virtue of fluctuating risk preferences and the people's propensity to hoard money which, say the Keynesians, dampens trade and harms social cooperation.

I wish to underscore what I mean here by the term "market failure." The first sense of this term is neoclassical and illusory, the second sense is Keynesian and real. For example, Cassidy (2009) considers "global warming" to be a market failure because it is a negative externality. Assume that all the present alarmism about this problem is sound. Still, pollution and global warming are not market failures, they are *failures of the market to arise* due to transaction costs of bargaining and difficulty defining and enforcing property rights. This is perhaps a semantic point, but let's keep it clear: in these cases there exists no market in the first place which can fail. What's more, the problem is not "Pigouvian taxes versus cap and trade." It is much more fundamental. One can engage in economic calculation of costs and benefits, profits and losses only within the market. There is no such thing as "environmental economics," only environmental politics precisely because one cannot calculate the "social costs" or social benefits and "correct the divergence between private costs and social costs." One cannot *economize* when he cannot quantify benefits and costs. It is no surprise that "there remains little consensus on how far to restrict future greenhouse gas emissions, or – and this comes to the same thing – how high to set the carbon tax" (123). Any such decision is going to be arbitrary from the market point of view and politically determined.

For example, a politician who runs for office promising to tax polluters has not invented a wonderful new technology to produce the same amount of goods yet pollute less in so doing. The tax will discourage both pollution *and* production, and the presumed problem is to find an optimal point at which further reduction in pollution is not justified by reduction in material prosperity. The politician then is taking a side in an unpleasant choice. This choice is not made by each consumer for himself but by the people collectively or by the organization that manages the air commons, such as the government. However the decision is made, almost everyone will be disappointed: some people would have preferred more production than was ultimately decided, others, less pollution. Moreover, the market responds to changing preferences in real time, daily; opportunities to change the

rate of the tax come far less often.

There are more problems. When the purpose of taxation is for the government to raise revenue, there is in the final accounting a point of diminishing returns à la the Laffer curve. Tax rates beyond this point actually decrease revenues. But if taxing is meant to discourage a harmful activity, then there is no such equilibrium. An ambitious and fanatical bureaucrat can decide that no pollution at all is best. But every industrial process emits waste or contributes to climate change. The power to tax polluters is the power to destroy the economy if the government chooses to set the maximum allowed pollution to zero. Further, we cannot give the government the power to "regulate" every company in the realm under pretext of pollution control. The government in conspiracy with big business can cartelize an industry, all the while publicly claiming that they are saving us from pollution. But what can we do? If air is fated to be owned in common, then there will be in society neither justice nor peace. The market is not at fault, the absence of the market is.

	***A*: Moral**	***A*: Amoral**
***B*: Moral**	10 / 10	20 / 0
***B*: Amoral**	0 / 20	1 / 1

Table II.3.1. Payoffs to fishermen.

Similarly, consider overfishing. The oceans are a commons and as such, though seemingly huge, are starting nowadays to suffer from the tragedy of the commons. The key to this devastating phenomenon is that I have a reason to grab as many resources as possible in the commonly owned pool *before others do the same*. Those others think that I will consider them greedy and grasping, that is, narrowly self-interested, and so will try to capture the best stuff first before they get to it. But why would *I* consider *them* such? Precisely because *they* consider *me* such, and so responding to my expected narrow self-interestedness, they will tend to act on the incentive to try to outdo me in seizing as much as possible. Moreover, if they are wrong about me, such that I am in fact eager to cooperate, then so much the better for them in that I will not even be in the competition. There is a mutual suspicion going on such that no actor can afford to treat others as innocent. "If I fail to move, the other guy, (falsely) thinking me quick and amoral, will attempt to counter me even if I am actually passive and so will take everything. He can't afford to trust me because if he trusts me and I turn out to be actually quick and amoral, then he gets zilch. Therefore, if I am to have a chance to acquire anything, then I'd better move and move fast." The resulting race to the bottom will predictably end up with the depletion of the resources in the commons. This is a form of the prisoner's

dilemma with the payoff schedule looking like Table II.3.1.

Whatever *B* is like, *A* is better off being "amoral" and exploiting the commons to the max. And the same is true for *B*. As a result, they both end up with 1, when they each could have obtained 10, over time. There is no *economizing* here since everyone tries to snatch as much as possible before others get their hands on it, and moreover no *economy* because an economy, in order to be rational, has to serve the consumers, and overexploitation does not serve the consumers in long run. Tragedy of commons also tends to feed on itself. The fewer fish remain, the lower the supply, the higher the price, the greater the incentive to catch the remaining fish. Again, this formidable problem exists because no one as yet has figured out how to privatize expanses of water, watery depths, and the seafood in them. Since there cannot be a true market without rights to private property, this again is the illusory sense of market failure because the market does not exist and therefore cannot fail.

It is possible with considerable effort to locate genuine market failures. They might take the form of "Smith sacrifices $20 so that Jones might get $100 and vice versa. Both would thereby benefit if each had an incentive to give up the $20." For example, Landsburg (1997b) considers the case of car anti-theft devices and concludes that the Club merely redirects thieves away from one's own car protected by the Club toward the neighbor's car parked next to it that is unprotected. It is like "hiring an exterminator to drive all the vermin next door." This device "encourages thieves to prey more heavily on those who haven't bought one. From a social viewpoint, if the total number of thefts does not change, then the expenditure on alarm systems is pure waste." On the other hand, a device like LoJack which is "a hidden radio transmitter that can be activated after your car is stolen, to lead police to the thief (or, better yet, to the chop shop that employs the thief)" is superior. "The transmitter is hidden randomly within the car, so thieves cannot easily find it and deactivate it. … But from a social point of view, the LoJack has the huge advantage of helping your neighbors rather than hurting them. The Club convinces thieves to steal someone else's car instead; the LoJack convinces thieves not to steal." In short, LoJack for cars is like concealed carry for people. Landsburg concludes that Clubs ought to be taxed, and LoJacks subsidized.

A number of objections can be advanced to this thesis, let me mention just one from the point of view of the market process. Let LoJacks be subsidized, perhaps the government pays some of the costs of their production. We may imagine the story unfold somewhere along the following lines. LoJack exists for a while and becomes an established company on the free market. At some point the government notices the positive externalities of this product and legislates a subsidy in order to spread these externalities far and wide. Suppose a new entrepreneur,

Smith, invents an improvement to LoJack, call it ZeroJack. How is Smith supposed to compete with LoJacks given the subsidy? Despite their higher quality and comparable to LoJacks cost to the consumers as it would be in the free market, the subsidy makes ZeroJacks too pricey. As a result, Smith's company never gets started in the first place which deprives the public of an important innovation. For no entrepreneur embarks upon a business venture and begins to manufacture a product the indispensable condition for whose success is first to change government policy, in particular to convince the bureaucrats in change of taxing and subsidizing things to withdraw the subsidy from LoJacks and extend it to ZeroJacks. Business does not work this way: unstarted companies do not lobby the government.

The moral is that true market failures are so exotic and startling that economists tend to pay an inordinate amount of attention to them precisely because of their rarity. They are the exceptions the awareness of which supposedly separates naive from sophisticated scholars. Keynes' market failures are real in the sense that they make no reference to externalities or public goods or asymmetric information; the markets are assumed to be fully enabled but still fail to yield full employment and maximum productivity. I disagree with this claim, as well, but at least Keynes is not talking nonsense.

We have seen that full employment is possible with any level of capital accumulation or prosperity, both high and low. It may be that Keynes diagnoses *under*employment due to lack of "full investment" due to higher than optimal interest rates due to capitalist uncertainty. Full employment for him will only be reached in a kind of fabulous socialist nirvana where capital will no longer be "scarce." Keynesians shy away from this aspect of their master's teachings. But, retaining his abhorrence of "high" interest rates, they put their faith in monetary policy. But it remains that attempts to drive the rate of interest below its natural value initiate the business cycle. Artificially low interest rates are unsustainable. Efforts to inject the economy with a growth hormone backfire: the economy ends up shrinking such that its overall productivity during the entire cycle is lower than it would be under laissez faire.

In other words, the first Keynesian mistake lies in holding that a free economy is not growing fast enough. In matter of fact, it is growing at precisely that rate that is most agreeable to the sovereign consumers. In order to go over the consumers' heads, Keynesians tinker with people's *time* preferences. Their second mistake is, when the business cycle inevitably rears its ugly head, to begin tinkering with people *risk* preferences in an attempt to check voluntary hoarding.

Dillard (1948) argues that this understanding shows that time preference is not active either in normal times or in a recession, not

influencing the rate of interest. For in both cases there is involuntary unemployment. At first there is no need to create voluntary savings by abstaining from present consumption because the Fed and the banks can create any amount of credit they wish, apparently supplying entrepreneurs with an unlimited amount of money capital. In the second case, in a recession, there is again no need to reallocate money from consumption to investment because it should be possible to pick up the unemployed factors for a pittance and make whatever we wish including future goods by means of more roundabout methods. Meltzer (1988) concurs, saying that in Keynes' economy, "output is not limited by factor supply, [and] investment is not limited by saving" (15). For Keynes nothing is scarce because everything is perpetually unemployed and hence available at no cost. Paradoxically, the "depression economics" is also the "economics of abundance."

However, the real reason for unemployment "in a chronic condition of sub-normal activity" is the fetters that the government has placed on the economy. Minimum wages, hiring and firing regulations, labor unionism, occupational licensing, anti-discrimination laws cause institutional unemployment. If there is an underclass of the unemployed even outside the business cycle such that entrepreneurs cannot collect them, then these people are not merely unemploy*ed*; they are unemploy*able*. Macroeconomic monetary policy to "stimulate the economy" and get those unfortunate people finally hired does not simply palliate microeconomic interventionism. Two wrongs do not cleverly contrive to make a right. It's not the case that the policies of labor unionism and inflation through credit expansion fit together like hand and glove which, when properly combined, allegedly mimic the market with surprising briskness and authenticity. In the short term, they just create monstrously distorted prices and production structure. In the long term, they do not work at all as union leaders catch on to inflation and demand still higher wages. The use of monetary policy in response to "chronic" unemployment and slow growth fails precisely due to the neglect of the time preference theory of interest.

Dillard goes on to suggest that the time preference theory of interest does not explain why interest continues to be paid in the slump. The reason why there is not enough money capital to scoop up the unemployed must then lie in the second cause of interest which is liquidity preference. Now it's true that less money savings than usual is needed to buy up the unemployed factors, but that does not mean that saving as such is obviated or that time disappears as a factor of production. In addition, interest on money loans for consumption is still fully operational. In other words, assuming that there are in the economy some unemployed resources as during a slump, it's still the case that workers want to consume now and capitalists want to receive a

future return on investment, and that lenders and borrowers will make contracts with each other. Idle resources are not after all *free*, their owners will still want to be paid, even if they would agree to a price lower than they commanded during the boom. But Dillard is right that low interest rates in a recession (if the central bank doubles down on credit expansion) may fail to produce a crop of new entrepreneurs. The pervasive discoordination makes it difficult to invest, and people are dazed and confused by the mass losses happening around them.

Far from an "unemployment equilibrium," unemployment is a disequilibrium phenomenon due basically to two causes: (1) permanent unequilibratable misalignments in relative wages and prices due to coercion by government or labor unions and (2) the business cycle with its mass entrepreneurial failures. In both cases the problem is incorrect individual prices including the interest rate, not aggregate demand. The freeing of the market as prices harmonize need not bring about lower aggregate demand (and who cares about that anyway?) but will eliminate *secular* unemployment. And ending inflationary credit expansions will eliminate *cyclical* unemployment. Secondary deflation with its PL disequilibrium will likewise be neutralized.

This understanding can explain the phenomenon of inflationary depression or stagflation. (1) Primary interventionism sustained by permanent taxes, regulations, trade barriers, etc. on the side of production or *wealth* creation, and by labor unionism, minimum wage laws, and so forth on the side of employment or *job* creation, seems to move the mind toward stimulating the economy with (2) monetary policy. This is yet another instance in which interventionism is shown to be unstable and tending toward complete collapse. One bad intervention seems to require another to fix it. When the fix makes things worse, new equally futile interventions are masterminded. The inevitable bust and impoverishment that result drive the prodigious intellects of government officials toward (3) secondary interventionism of the fiscal policy.

The stagflation of the 1970s was then due to a conjunction of (a) runaway monetary policy and (b) both primary and secondary interventionism creating unemployment, checking economic growth, and even resulting in degeneration of living standards. (a) fought with (b) and lost. Stagnation results from the transfer of sovereignty from the consumers to the state in various ways; significant price inflation results from the central bank's attempts to induce some kind of growth despite that. Mises' conception of the "harvest of interventionism" had to do with taxation. It would arrive when soaking the rich would no longer be possible, and all tax increases would be borne by the middle class. The "reserve fund" of society would be exhausted. Stagflation occurs when the interventionists are reaping what they sowed.

4. That stagflation may be our interventionist best

Hyman Minsky (1982), a noted Post Keynesian, focuses upon deficits because he claims that they, along with an aggressive monetary policy, have so far prevented the repetition of the Great Depression. They have done so by sustaining high profits for businesses, even though "the government deficits do not result from spending that leads to useful output," "big government is a shield that protects an inefficient industrial structure" (56). However, Minsky says, though deficits and inflation can prevent a depression, they have unpleasant side effects. Especially important is that they are cumulative such that sufficiently large deficits (via "validation of an inept business structure and poorly chosen investments" (57)) lead to stagnation, and sufficiently activist monetary policy leads to inflation. Put together, they inaugurate the noxious environment of stagflation. Stagflation, in Minsky's opinion, "is the price we pay for the success we have had in avoiding a great or serious depression" (16). This explanation has similarities to the one I offer in the previous chapter, though I would say that stagflation is the price we pay for the fatal conceit of dreaming that we can manage the economy "scientifically." I would also subsume deficit spending into the interventionist octopus as a whole. Keynesians have been drunk with power for almost a century, but they are not the great wizards controlling cosmic energies they imagine themselves to be, at most they are wizards of Oz.

Stated differently, Minsky argues that we are caught between a rock and a hard place. The rock is the fact that "financial traumas… occur as a normal functioning result of a capitalist economy. …there are inherent and inescapable flaws in capitalism," namely, capitalism's tendency toward deep depressions. (111-2) The hard place is the toxicity of the remedies for those flaws. This is half-right. As Mises has argued, it is often the case that government interventions are volatile: they beget, or try to, further interventions. Thus, the laissez faire that Minsky condemns as unstable is not laissez faire at all; it is hamstrung by (1) legal privileges to the banking industry, legal tender laws, deposit insurance on the government side, (2) lending of some kind of resort on the central banking side, (3) ideology of inflationism (namely, the false belief that credit expansion by commercial banks can generate wonderful prosperity for all) on the side of the masses, and all the rest. It is these factors that are responsible for business cycles, and since the public demands that something be done about them, the government is faced with a dilemma: should it go "back to the future" to hard money, competitive minting, and 100%-reserve standard for deposit banking, or should it "manage" the already crippled economy so as to attempt to

prevent another Great Depression? The state is unlikely to relinquish control over money creation, the all-important pillar of its pelf and power, without intense public pressure, which is why we indeed regress into stagflation as a substitute illness for depression.

Thus, Minsky keeps referring to "the observed instability of capitalism" (73). But that begs the question: is it laissez-faire capitalism that is unstable or rather the current *political economy* that deviates from capitalism? Is the instability in other words within the *economy* or within *politics*?

Minsky's own theory of the business cycle is somewhat similar to the one set out in this book. For example, he realizes that a high level of business activity (which he divides into hedge, speculative, and Ponzi, each in this series riskier than the previous one) makes the economy "increasingly sensitive to interest rate variations" (106). If only he had realized *why* so many would-be entrepreneurs appear out of nowhere during a boom: it is because credit expansion makes a great number of new investments including into longer (and more speculative and riskier all the way to Ponzi) projects falsely appear to be profitable. As it is, he holds a paradoxical view that "stability – or tranquility – in a world with a cyclical past and capitalist financial institutions is destabilizing" (101). So far as I can tell, it is human nature, Minsky thinks, to rebel against stability as such and take greater and greater risks until men's projects crash and burn at which point people, having learned their lesson, will want stability again. This sort of dubious psychological analysis, however, does not satisfy the mind.

Minsky's first premise for interventionism is again that laissez faire is fundamentally erratic and tends on its own toward nasty business cycles. Eliminating the cycles is the job of that archrational supercomputer that sees all and knows all, even what Minsky himself acknowledges as our "very sophisticated and convoluted financial system" (199), the Federal Reserve. In the process of operation, however, the Fed creates inflation because this is the only way of smoothing out the business cycle. Thus, our supercomputer must be wise and strike a correct balance between the amount of inflation and the depth of the recession that it allows. According to this Phillips curve analysis, the Fed's goal is low-inflation growth. Minsky's second premise is that "big" government should, through deficit spending, make sure that private business does not suffer losses. The goal is financial stability such that companies deemed "too big to fail" do not experience collapse, though "if the government stands ready to guarantee particular investors or investment projects against losses," the system "can approach the inefficiencies of a Stalinist economy" (113).

As regards the first premise, the growth that the Fed promotes is not at all the healthy slightly deflationary secular growth but rather the

boom part of the business cycle. For Keynes, booms or "quasi-booms" have no disadvantages inherent in them. So even if the Fed starts the boom, can it perhaps successfully steer the economy toward a soft landing? Not really. Scarce resources have already been objectively misallocated, the will of the consumers has been trampled on. The interest rate governs allocation of capital over time. If capital was deployed poorly, the error cannot be easily undone. Now the Fed centrally, though indirectly and with a time lag, plans a key variable, namely, the interest rate whose value, sans the ideology of inflationism, would be set by the market. But central planning does not work. Hence, the best thing that the Fed could do is allow the interest rate to become equal to the natural rate. Unfortunately, in the present situation the Fed neither knows the value of the natural rate nor could force it (along with the correct quantity loaned / invested) even if it did know it because any amount of credit expansion relative to the previous state of affairs lowers the interest rate below the natural level, and credit contraction can raise it above that level. The Fed then is stuck trying to minimize the combined misery from a recession / unemployment and inflation. But it's not as if it could work by trial and error, changing the money supply fairly rapidly and seeing what would happen. The position of the Fed is vastly different from the position of a shopkeeper who can vary his prices every day in order to unload his inventories. The central bank cannot change the variables it controls often as a store owner can change the price of a box of raspberries. Moreover, it must predict the state of the *entire* economy in all its complexity precisely at the time, after the numerous lags have elapsed, when its policy will finally be having an effect. And this it can hardly do. Like any quasi-socialist institution, the Fed is irrational in more ways than one.

The second premise, as I understand it, is based upon the following picture. Let *X* owe money to *Y*, *Y* owe money to *Z*, *Z* owe money to *W*, etc. If *X* were to default on its debt and declare bankruptcy, then *Y* would have no income with which to pay *Z*, so *Y* would collapse as well, and *Z* would collapse soon after for a similar reason. The downfall of one company results in a cascade of losses and economic disaster for a nation or the world. What truth there is to such a possibility stems from the fragility of the banking industry due again to its unsafe fractional-reserve intercourse with (or rape of?) the people and the incentives that generate moral hazards to banks as described in (I, 41). Banks are not free-market institutions, which means that laissez faire can once again be absolved of the guilt for depressions. At any rate, a cascade of losses cannot normally occur because numerous simultaneous losses are needed to trigger such a chain reaction. Most people and institutions will survive even if some of their debtors refuse to pay. It is only when there are true *mass* losses, a phenomenon fully

accounted for by the Austrian business cycle theories, that general insolvency of even financial powerhouses becomes possible. However, those powerhouses bring their doom entirely upon themselves: they prayed to the state for fractional-reserve banking (for selfishly antisocial reasons, as the masses wanted it for ideological reasons), and they are getting exactly what they asked for. There is no honor among thieves, and the state regularly betrays those who it thinks have outlived their usefulness.

It is interesting to uncover the metaphysical presuppositions of various economists. Anyone who desires to analyze some system must determine (1) whether the system is natural or artificial and (2) whether it is self-sufficient or dependent on something outside of it. "Natural" here means having originated *in the past* without a direct intervention of an intelligent agent, "self-sufficient" means that it depends on nothing for its *present* operation. For example, a car is both artificial, being a man-made object, and dependent on a driver to operate properly. A single-celled organism is artificial, having apparently been in some part intelligently designed, but self-sufficient, able to survive and function on its own. However, a subsystem within that cell responsible for that cell's resistance to antibiotics is both natural and self-sufficient.

Most nature is self-sufficient in the sense that God does not occupy His eternity protecting the creation from inevitable collapse. God does not drag things through the vacuum nor keeps the earth from falling into the sun nor brings the economy into equilibrium. Nature knows how to take care of itself. God does no violence to nature, such as when nature wants to do *X* but God intervenes and forces it to do *Y* instead, other than perhaps through explicit miracles. Where nature is not sufficient, grace abounds, but the difference between grace and miracles is that the latter are coercive while the former is not. Intelligent design *forms* things, i.e., it "creates information" such that wherein nature would "choose" randomly, the designer chooses, that is, constrains vague possibilities into something definite, intelligently in order to reach a goal.

With respect to the economy then, one can first deny that it is a natural system at all, as Marx did. For Marx, the free society is in fact profoundly perverse, with the state protecting the capitalists' property rights in the means of production to the detriment of the vast majority of people. Laissez faire, instead of being a natural system of liberty, is an artificial and self-"negating" clunker that is bound to fall apart because of its inner contradictions. Of course, a capitalist economy is an outcome of numerous purposive and intelligent human actions. But the economy as a whole is not designed by any overarching intellect, though its manner of operation can be understood by the human intellect, and the economy can be freed from government control by an explicit society-

designing ideology such as libertarianism (or on the contrary entangled into such control by a statist ideology). Social evolution and social intelligent design complement each other. Economists are fundamentally lawgivers.

Alternatively, one can accept that the free market is consistent with nature (i.e., that it was not imposed on people by force or guile but arose by serving the self-interest of the immense majority and continues to do so) but deny that it is self-sufficient, as Keynes did, asserting that it needs constant government intervention in order to hobble along somehow.

Finally, one can think of the free economy, as the Austrian school economists have thought of it, as both natural and self-sufficient, not "so defective that reiterated… intervention is needed to prevent its failure" (Mises 1996: 147).

The difference between Marx and Keynes is less significant than it seems. Each intervention generates perverse, from the point of view of those advocating it, results that seem to make the case for still further, and equally counterproductive, interventions to "correct" them. As they snowball, interventions paralyze the market and transfer power from the people to the state. For example, as Minsky himself points out, guaranteed by the fiscal policy profits will cause businesses to be more reckless, therefore increase instability, therefore nullify the protection that big government allegedly offers against instability. (43) In the meantime, the capitalists will no longer be serving the consumers. Once this is realized, more controls and restrictions on business will be demanded, etc. If so, then Keynesian bungling inevitably leads to Marxian socialism. The contrast lies in whether socialism will arrive quickly via a violent revolution or slowly via step-by-step sabotage and strangulation of the market.

It almost seems that Minsky had despaired of the possibility of social cooperation under the system of natural liberty. Now St. Thomas' opinion was that human nature was wounded by the possibility and ease of sin. However, a man can, with constant struggle both to maintain innocence and to grow wise, master himself, and achieve imperfect happiness in this life. I submit that our political life too is wounded deeply (1) by the state that – instead of doing the only task it can in actual fact perform, namely, enforce free and honest trade – mad with destructive power, constantly shoots the economy in the foot, (2) by the corrupt pressure groups seeking private advantage at the cost of general welfare, and (3) by ideological nonsense like inflationism and tax-and-spendism. But I hold that if we struggle manfully, then we can create a peaceful and incredibly prosperous commonwealth that would span the entire globe and then maybe even beyond! The sky for us is the limit. Mises (1996) argues that "the tremendous progress of technological

methods of production and the resulting increase in wealth and welfare were feasible only through the pursuit of those liberal policies which were the practical application of the teachings of economics" (8). As the joke goes that humans use only 10% of their brains, so perhaps only 10% of what is firmly established in economics is used in policymaking. My own strategy for the liberation of society from state oppression can be summarized as "morals for the masses, economics for the elites." If only we were schooled in economics and committed to the common good, half the job would be done, and we would be ready to fill the earth and subdue it as befits creatures as great and fearfully and wonderfully made as us men.

Minsky concludes that few people understand American capitalism. He would have done well to realize that the American banking industry was a travesty of capitalism and that his own understanding of capitalism was weak.

5. That Keynesians cannot get even toy economies right *or* Krugman goes Stalinist

In an attempt to be "whimsical" and come up with "fresh insights," Paul Krugman (2009) presents a "model economy," a babysitting co-op. Each member was issued in various ways a number of coupons each of which entitled its holder to a one-hour babysitting session from other members. Apparently, what happened then was that the co-op members began accumulating coupons because they wanted to spend many of them in one spree. Krugman writes that "the details aren't important: the point is that there came a time when relatively few coupons were in circulation – too few, in fact, to meet the co-op's needs" (17). Here then is the first problem: that the co-op "went into a recession" does not follow from the behavior of the members. For the couples with children still wanted to spend their money; they just wanted to spend lots of it every once in a while rather than small amounts but more often. 150 couples is a large enough number so that despite this tendency the spending would be distributed more or less evenly such that there would always be opportunities to babysit. The same of course is true for the real economy.

Each person will have his own supply of and demand for money-coupons. Since the price of babysitting in terms of coupons is fixed, the market will sooner or later stop clearing, resulting in shortages and surpluses of babysitting services. But Krugman's claim goes beyond that. Since this model is supposed to illustrate economic reality, let's pick hoarding as the cause of trouble; therefore, and second, Krugman must

postulate a vicious spiral of insecurity resulting in fewer opportunities to babysit which caused people to treasure their coupons even more (knowing that earning new ones would be difficult) which resulted in still less spending, and so on. The number of coupons in circulation will be diminishing, generating an ever-wider distance between quantity supplied of coupons and quantity demanded. Ok, but how did the cycle boot itself? Was there a bout of hoarding that just triggered the spiral? The details may not be important, but they would certainly be enlightening.

There are two notable disanalogies between the model and the real economy. Third, the general rise in the hoarding of money is not in the real economy the cause of the business cycle or of its slump phase. Hoarding may accompany a recession, hoarding may even accelerate a recession (and recovery) as argued earlier, but sudden and dramatic increases in risk preferences simply do not occur, at least not without a cause. Remember that risk preferences measure people's confidence in themselves and their skills in their capacity as entrepreneurs. Mass losses can undermine people's self-confidence. But folks rarely turn into scaredy-cats without a cause.

The second disanalogy is the most crucial. Fourth and finally, hoarding increased the demand for coupons. In the real economy, such a phenomenon usually results in price deflation which neutralizes the excess demand for money without any negative consequences. (This is not because money is neutral of course but because a decrease in V is usually only a mild change in the market data.) But in the case of the co-op, there was no price deflation! It was written on each coupon that it was worth one hour of babysitting, no more, no less. Smith could not, therefore, say to Jones, "Babysit for me one hour for half a coupon." Or, "Babysit four hours for three coupons." The prices were rigid and could not adjust. No wonder there was trouble. I would expect that the difficulties began very soon after the co-op's creation. And I fully admit that the solution Krugman praises, one that would supposedly naturally occur to "economists," namely, printing more coupons, "fixed" the problem. In the immediate run. The market process that would have dealt with the deflation "automatically" by increasing the purchasing power of each coupon was not allowed to work. And without flexible prices, the officers of the co-op, the would-be socialist central planners, were then stuck with fine-tuning the coupon supply so as to keep the little economy functioning. I am not optimistic about how good a job they did of it; the outrageous unfairness of giving coupons to some and not others would by itself be enough to do the co-op in.

Therefore, if the "neoclassical synthesis" has it that recessions are due to sticky wages and prices, then it is entirely trivial. Rigid prices are usually not market phenomena, and moreover it does not take a

Keynesian to figure out that they can be economically vicious. Krugman may of course interject that this toy economy is not realistic. Apparently, for our author, it is Ok to play with toy economies only when they yield Keynesianism-friendly results.

In the process of illustrating the phenomenon of a liquidity trap, Krugman postulates a seasonal pattern to the supply of and demand for babysitting. In winter few people want to go out, but lots would babysit; in summer the opposite situation prevails: high demand for going out occurs concurrently with low supply of babysitters. Krugman proposes that the co-op create a "central bank" which would charge low interest rates in the winter and high interest rates in the summer. It would create money when lending and destroy money when it is repaid. He is mistaken in holding that it is "monetary policy" that would be required in the co-op. For in winter I have already accumulated a coupon balance which I am waiting to spend in the summer. Why would I borrow additional money in the winter even at low interest when my hoard is already large and if I have to repay the money in the summer when I need it most? There is no analogy to the real economy here in which credit expansion is supposed to boost *production* by deceiving the entrepreneurs about people's time preferences. There is already lending and borrowing with voluntary savings, and the central bank wants to stimulate this activity. Producing babysitting involves no lengthening of the production structure, it uses no material factors of production at all, and no one borrows coupons in order to finance his babysitting operation. Incidentally, this policy would soon result in coupon supply deflation because the amount of money destroyed would exceed the amount created as the money is repaid to the central bank with interest.

The only way to keep the co-op working in the face of rigid prices is "fiscal policy." In winter the management taxes the hoards and spends the coupons on fake babysitting, providing unproductive worthless "jobs." In summer the management taxes the coupons that would otherwise be spent and hoards this money itself in order to dampen the demand for going out. Of course, the "fiscal policy" can never approach the efficiency of flexible prices, but it is the only thing that can save the co-op the way it is set up from falling apart.

Krugman's suggestion, moreover, has no analogy to the liquidity trap in the real economy. Our author goes on: "one thing that can get an economy out of a liquidity trap is *expected* inflation, which discourages people from hoarding money" (75). Now if *deflation* is expected, then people may hold on to money in order to take advantage of lower prices in the future which accelerates actual deflation. Similarly, expected inflation causes prices to rise and people to buy now so as to avoid paying more later which this time accelerates actual inflation. But in fact people start getting rid of savings for real only in the last phase of

hyperinflation in which there may occur a "flight to real values."

Krugman considers a global fiat currency, the "globo," manipulated by a world central bank. Seemingly an attractive to the Keynesians scheme, he finds it flawed in that when one part of the world "needs" an easy-money policy, another part may need tighter money. Hence, "although careful management of the globo could prevent a boom-bust cycle *for the world as a whole*, it could not do so for each piece of the whole" (103). Very well, so why not consider another extreme: each town issues its own fiat paper money. Surely, that would be utter chaos. So, a middle ground needs to be struck by having each nation manage its own currency. It is arbitrary, but it is the best we can do. The odd thing is that Krugman considers "the closest thing" to the globo to be "the pre-1930s gold standard." Let's abbreviate the noninflationary international gold standard as IGS. (One global world government-controlled fiat currency is an abomination; global commodity money such as gold is an immeasurable blessing.) Is IGS really identical to the globo? Krugman goes on:

> There are three things that macroeconomic managers want for their economies.
>
> [1] They want discretion in monetary policy so that they can fight recessions and curb inflation.
>
> [2] They want stable exchange rates so that businesses are not faced with too much uncertainty.
>
> And [3] they want to leave international business free – in particular, to allow people to exchange money however they like – in order to get out of the private sector's way.
>
> What the story of globo and its demise tells us is that countries cannot get all three wishes; at most, they can get two. (106)

It could no doubt be pointed out that IGS would deprive national governments from access to monetary policy. An obvious rejoinder is that recessions are an inevitable result of inflationary booms. The "macroeconomic managers" themselves start the inflation and credit expansion which then ineluctably produce recessions. The business cycle is a Keynesian-interventionist atavism. Under IGS coupled with 100%-reserve banking we will no longer face the fake choice between "inflation" and "unemployment." Thus, [1] is entirely unnecessary under this regime. The market process could of course easily injure a particular town or industry while benefiting the world's consumers. But there is no escaping that if any kind of economic progress is to be had. That it could injure an entire nation is much less plausible. Because national currencies, if they still existed, would be merely references to weights of gold, e.g., $100 would mean 1 ounce of gold and €100 would

mean 1.5 ounces, [2] would be enforced automatically and perfectly. And [3] would be a trivial matter of adhering to free trade and moreover would check domestic inflationism.

If in addition national currencies were abolished and banks, though being required to maintain 100% reserves for all demand deposits, could issue their own notes, then this would make things even easier insofar as no government would be able to print money even in the presence of IGS, thereby causing inflation in its original sense, namely, an increase in the amount of paper receipts that are not backed by commodity money, and with that all manner of international strife. If we call the version of IGS marked by no national currencies (i.e., by private coinage), no central banking, and 100% reserve requirements "Pure Gold" or PG, then, whereas prevention of inflation by governments under IGS would be a *political* matter and therefore highly inefficient, enforcement of PG would be merely a *legal* imperative and just another part of any government's mission to protect people from aggression and fraud. It appears that IGS / PG is superior to the globo in every respect.

Note also that the conclusion that any community may "need" an easy-money policy is based on the false premise that an economy under laissez-faire money underperforms and that this unfortunate condition can be cured by credit expansion. As a matter of fact, free economies perform or grow at the exact rate that the whole people, by saving and spending, endorse.

Krugman even goes so far as to say that smaller countries often cannot follow the economically correct "Keynesian compact" because allegedly economically ignorant foreign investors distrust Keynesian policies. Unfortunately, Krugman has fallen victim to Keynes' many paradoxes: thrift is bad, profligacy is good; stable prices are bad, inflation is good; balanced budget is bad, debt is good; market interest rates are bad, government-fixed interest rates are good; saving is bad, credit expansion is good; actions that would be wicked and unjust when perpetrated by an individual are for the greater good when done by the state; etc. These paradoxes do not indicate that macroeconomics calls for a unique mode of thinking that Krugman has mastered and that the investors have neglected. It is not the investors who are wrong, it is Keynes.

What about the fact that the U.S. and the European Union have one-size-fits-all monetary policies? Krugman argues that for such a feat to work, there needs to be high labor mobility either as a necessary or sufficient condition (I am not sure which), such that "workers can and do move rapidly from depressed to booming regions" (106). I disagree that imperfect labor mobility can break IGS. This is because "depressed" and "booming" regions will not be occurring like clockwork according

to the Austrian business cycle theory.

Further to understand the difference between the two kinds of gold standard, let's consider Krugman's tale of the 1998 speculative attack by a number of hedge funds on the Hong Kong currency. Hong Kong, though first in the indexes of economic freedom, was still suffering from the recession that afflicted its Asian neighbors at the time. The Hong Kong government maintained a fixed exchange rate of 7.8 HK dollars per 1 U.S. dollar. What happened was that the hedge funds shorted $30 billion worth of Hong Kong stocks, which means that they borrowed the stocks, sold them for HK dollars, and traded this money for U.S. dollars. "In effect," Krugman explains, "they were betting that one of two things would happen. Either the Hong Kong dollar would be devalued, so that they would make money on their currency speculation; or the Hong Kong Monetary Authority would defend its currency by raising interest rates, which would drive down the local stock market, and they would make money off their stock market short position." (129) The U.S. dollars were being drained from the central bank's reserves; the defense of the currency would consist in reining in the supply of the HK dollars, as well. This would bring about deflation as credit normally pyramided on top of the reserves by commercial banks would be contracted and aggravate an already severe recession.

But if the bank inflated the supply of HK dollars in response by buying assets and lowering interest rates, then the HK dollar would become overvalued. People would rush to exchange HK dollars for U.S. dollars, and quickly enough they would find no private entity willing to sell them a U.S. dollar for exactly 7.8 HK dollars. So, they would turn to the central bank. But that would cause a still greater outflow of U.S. dollar reserves from Hong Kong. Eventually, just as private persons would not *want* to sell $1 U.S. for $7.8 HK, the bank, having run of out the reserves, would not *be able* to sell at the same rate, and with that, the peg, i.e., the fixed exchange rate, would collapse, necessarily causing a devaluation. By trading their U.S. dollars back for HK dollars, the hedge funds would benefit from the inflation by obtaining the new money first. It is clear from this story that even IGS would not be bulletproof. For full laissez-faire protection against such an attack, we need PG.

Krugman defines something he calls the "shadow banking system." By that he refers to bank-like institutions that, like investment banks, channeled capital to various projects but were unregulated and offered higher interest rates than regular banks.[1] For example, he describes an arrangement known as an auction-rate security. "Individuals would lend money to the borrowing institution on a long-term basis; legally, the money might be tied up for thirty years. At

frequent intervals, however, often once a week, the institution would hold a small auction in which potential new investors would bid for the right to replace investors who wanted to get out." (158-9) Seemingly, this parallels the devilish enticement of regular banks which confused deposit and loan banking: a person would both receive interest and be able to get his money at any time on demand. However, the likeness is deceiving. For

1. the shadow banks were not fractional-reserve;
2. they were unconnected with the Fed, the FDIC, and the rest; and the investors were fully aware
    a. that the money they had put in did not legally belong to them; and
    b. that they could get their money back only if other people were willing to buy them out.

The shadow banks were legally clean and economically nonthreatening. The banks which to Krugman appear sinister were in fact contractually honest free-market arrangements that could never on their own power create a business cycle. Far from it, they were a testament to the market's ability to function and compete even under the worst possible political regimes, in this case the regime that sanctioned and protected the insidious government-banking complex.

Thus, the inherent instability of fractional-reserve banking coupled with "the rise of financial globalization, with investors in each country holding large stakes in other countries" (177) ensures that economic crises will come with disheartening predictability and that this time they will be global in scope.

Krugman seems to prefer fiscal policy to monetary policy, at least in the 2008 crisis. He will take government activism over that of the Federal Reserve. And, as befits a bright person who is also a fanatic, he takes his ideas – which are monstrous – to their logical conclusions. Thus, during a crisis, he proposes to (1) nationalize the financial industry ("temporarily"); (2) have the Federal Reserve buy up the assets of private corporations (and not just government bonds), nationalizing everything else in America; and (3) pour money into "developing countries," acquiring finally the rest of the world. He recognizes no limits to the power of the state. And after this, he dares to accuse his potential opponents of "getting tied up in ideological knots"! (186-7) Surely, Mr. Krugman would not object to a reform so modest and pragmatic as outlawing fractional-reserve banking, monetizing gold, and ending the Fed. Or is he a mad enough Keynesian to communize the world instead?

6. That the “Keynesian cross” assumes a PL disequilibrium with rigid prices

The Keynesian cross is a graph that links “planned expenditure” E_p on the y-axis with real income Y on the x-axis. “Planned” can mean a couple of things. Say I am in line at a convenience store and all of a sudden fancy a piece of candy. I pick it up, and it happens to be the last candy bar of this sort in the store. Behind me next in line is a fellow who came to the store specifically to get this bar of candy. He is pretty upset, but what do I care? We see that my “unplanned” impulse buy was successful, while his planned expenditure was unsuccessful. However, from the point of view of the candy’s producer, it does not matter who got the thing. All he cares about is the sale. By “planned” expenditure then it is rather meant “expenditure (a) foreseen and (b) provided for by entrepreneurs.” Conversely, unplanned expenditures, such as net savings channeled into investments in the process disturbing an evenly rotating economy, are those that have not been foreseen. Thus, for planned expenditures, quantity supplied equals quantity demanded and not so for unplanned expenditures. If $Q_s < Q_d$, then the entrepreneur foresaw that he would sell the entire stock but failed to provide enough to satisfy the demand. If $Q_s > Q_d$, then on the contrary the entrepreneur produced a sufficient but unnecessary amount such that every buyer went home happy, but a part of the inventory was unsold.

“Autonomous” spending is that which is independent of income; it can be financed by savings, by selling assets, or by borrowing. Presumably, it is at least that amount of money needed to sustain life and satisfy basic needs.

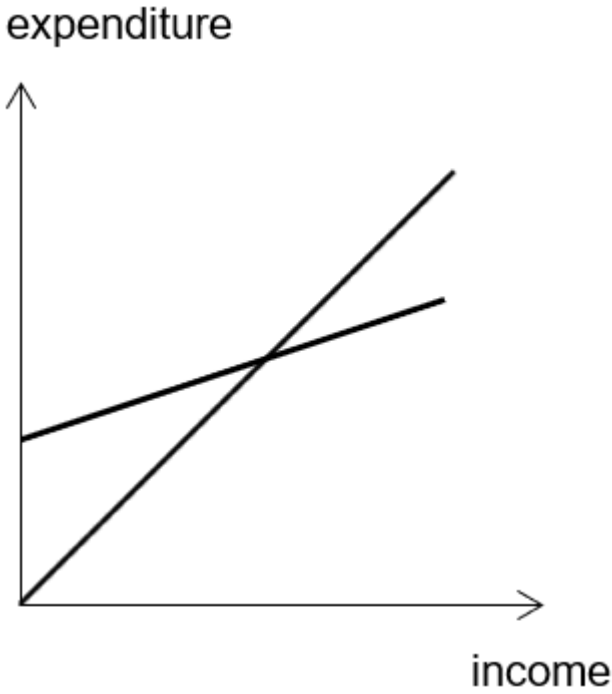

Figure II.6.1. Keynesian cross.

Keynes' dubious *psychological law* in Figure II.6.1 is expressed in the line with the equation

$E_\mathrm{p} = A_\mathrm{p} + cY$,(Eq. II.6.1)

where A_p is autonomous planned spending, c is the propensity to consume, and Y is income. Low-income people will spend more than their income each time period, and high-income people will spend less. There is already a problem here. It's true that if an individual loses his job and receives no income this month, then he'll still consume something out of his hoarded balance or by cashing in his investments. He will dissave. But the community as a whole cannot do this because if no one receives income, then no one is working, and if no one is working, then nothing is produced and hence there is nothing to consume.

The property of the *circular flow diagram* that all income is spent either by factor owners or by firms is depicted as a straight line from the origin at a 45° angle:

$E_\mathrm{p} = Y$.(Eq. II.6.2)

The intersection of Eq. II.6.1 and Eq. II.6.2 is the equilibrium point (A_p / $(1 - c)$, A_p / $(1 - c)$) in which the economy is primed to evenly rotate.

Finally, the *multiplier* comes into effect when A_p changes: if c =

0.75, then for every point of increase in A_p, both equilibrium income and planned expenditure increase by $1 / (1 - 0.75) = 4$ points which is the multiplier. (See (I, 21) for an algebraic derivation of the multiplier.)

Let $E_p = 1{,}000 + 0.75Y$ (in billions of dollars). If the economy is not in equilibrium (which is attained at (4,000, 4,000)), for example, at point (6,000, 5,500), then $6,000 billion "worth of goods" has been produced but only $5,500B has been spent in one production period. That $500B would be saved was not anticipated by the entrepreneurs. Here is where the textbook account of what is going on and our own will diverge. The textbook claims that the unsold goods will accumulate in inventories and businesses will cut production. There is "overproduction" or general glut. Say's law has gone out the window.

Unfortunately, the Keynesian cross has nothing to say about the fate of the saved $500B. Logically, there are three things that can be done with it. First, consider that production in the aggregate will be decreased only if it is projected that in the *next* time period *consumption* will remain at $5,500B. But it need not necessarily do so: it may even be expected to exceed the old amount and grow to, say, $6,200B. In that case, production will contrariwise be shifted into high gear. In other words, if more money is spent during the next period of production, then companies that failed to anticipate that will lose, while companies that invested into building expensive goods to be delivered precisely during that next period will win out. For example, firms that stand ready to build or sell a house to Smith on notice will benefit if he has been saving $200K to be spent in a single dose on the house (perhaps Smith dislikes being in debt). That they foresaw his demand, say, a year ago when his savings were far from complete is a tribute to their entrepreneurial skill.

In addition, people don't have to buy *the same things* from one period to the next. Each entrepreneur competes with all other entrepreneurs and therefore struggles to improve the way in which he serves the consumers. There will be profits and losses quite apart from changes in overall consumer spending. Looking at aggregate consumption is not especially helpful.

Second, if the contested $500B is *invested*, then we are faced with the by now familiar morphing of the production structure. I have nothing more to add here to what has already been said about it.

Third, if this money is *hoarded*, then the ultimate result is the fall in the price level. This fall occurs gradually and step by step one price after another as explained in (I, 42). If entrepreneurs whose selling prices fall first realize that the lower demand for their goods is due to the higher demand for money, they will lower prices and cut wages while keeping the same output. (If they don't, their mistakes will curtail production.) Thus, a single dose of deflation will permit even some

losers to evenly rotate in the future. Those firms whose buying prices, i.e., costs of production, fall before their selling prices fall will earn extra profits in the meantime. Such luckier firms will be able to obtain the products of the less lucky firms for less, and they may be able even to lower wages before the demand for their goods drops. (If various people anticipate the lower V, multiple additional nodes within the economy will be set up from which price deflation will spread, and the overall fall in the price level will be sped up.) In the end, equilibrium is restored with lower prices and more valuable money.

The Keynesian idea here is that the PL disequilibrium brought about by hoarding will result not in price but in quantity adjustments. Instead of prices changing, there will be unemployment and lower output. And this may be so if prices are made rigid with unjust coercion or if entrepreneurs make errors. But in the *free* market *in the longer run* this view is untenable.

The market is undeterred in the face of the "microeconomic" fact that each person consumes this good today and that one tomorrow, that he invests in one company today and another tomorrow, that he hoards and dishoards at will. It is still undeterred in the face of the "macroeconomic" fact that the *aggregate* amounts of consumption, investment and hoarding differ from one period to another. The Keynesian cross is premised on the idea that entrepreneurs are incapable of predicting future consumer demand and accommodating new investments. It considers individual entrepreneurial losses to be indicative of some global market failure. Yet the fact that change is omnipresent in human affairs does not entail any macroeconomic chaos or inefficiency.

In essence then, this little model claims that firms cannot increase production beyond the equilibrium point because there will be hoarding, and they will not be able to sell all their goods at a profit. The equilibrium income around which we thus oscillate need not even correspond to full employment. A policy conclusion is that the expenditure curve ought to be shifted up. Since E_p is composed at least of autonomous consumption C_p less taxes T, planned investment I_p (which depends on "animal spirits"), and government spending G, monetary expansion will raise I_p, and fiscal policy can lower T and boost G through deficit spending. Now everything in this reasoning is wrong. No psychological law necessitates any amount of hoarding or dishoarding. Hoarding is irrelevant outside of secondary deflation and does not injure production. There is no such thing as equilibrium with unemployment. The remedies for this nonexistent illness do not work and in fact cause the illness itself. Both relative and absolute price coordination performs adequately. Such, anyway, is the rather shallow economic meaning of the Keynesian cross.

7. That the IS-LM model illustrates the workings of monetary and fiscal policies

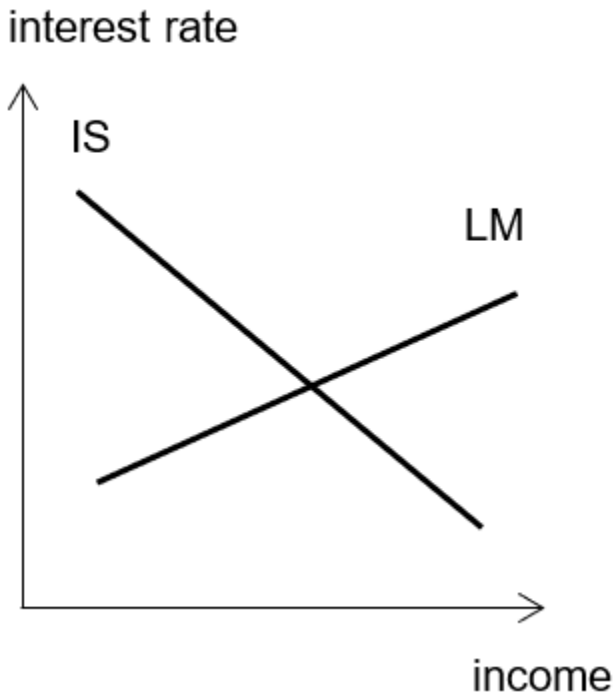

Figure II.7.1. IS-LM model.

The IS ("Investment / Savings") curve in Figure II.7.1 builds upon the Keynesian cross. It takes as given that aggregate income depends upon autonomous spending. As shown in the previous chapter, the value of real income Y at the equilibrium point at which curves Eq. II.6.1 and Eq. II.6.2 intersect, is $A_\mathrm{p} / (1 - c)$, where A_p is autonomous planned spending, and c is the propensity to consume. In addition to that relationship, there is also the fact that A_p is a sum of several components which include autonomous consumption and "planned" investment: $A_\mathrm{p} = C_\mathrm{a} + I_\mathrm{p} + G + NX$. I_p depends negatively on the interest rate, but consumption does not. Call this the CE (for "credit expansion") hypothesis. Now it would seem at first glance that in the short run consumption and investment run in opposite directions relative to each other: the more is consumed, the less is invested, and vice versa. (In the long run with more investment there can be both more consumer goods and more capital goods.) Therefore, CE is to be interpreted in very "modern" terms: when the central bank increases the supply of fiat money and commercial banks pyramid credit money on top of their new

reserves, the interest rate declines and investment skyrockets without lessening consumption. (This, and not the Keynes' wages idea, deserves the name "money illusion.") Hence A_p itself depends negatively on the interest rate, and so does income, e.g.,

$A_p = 2{,}500 - 100r = f(r)$,(Eq. II.7.1)

with r expressed as a percentage such as 5%, and

$Y = f(r) / (1 - c)$.(Eq. II.7.2)

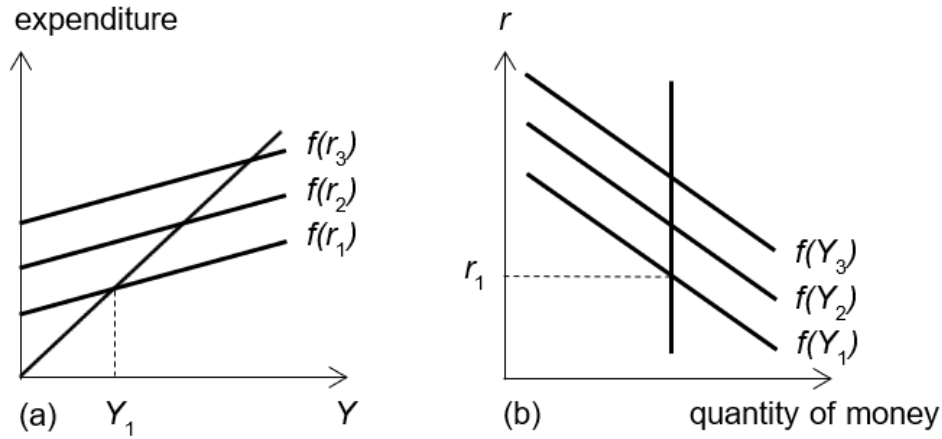

Figure II.7.2. (a) Keynesian cross determining IS and (b) Keynesian liquidity preference determining LM.

Eq. II.7.2 can be plotted on a graph with the interest rate on the y-axis and income on the x-axis. It is downward sloping. For every r, Y is such that (Y, Y) is the equilibrium point of the Keynesian cross corresponding to Eq. II.7.1, and the economy can evenly rotate another round. This is shown in Figure II.7.2(a). At these Ys saving equals investment with no hoarding or dishoarding taking place.

The LM ("Liquidity / Money") curve is drawn within the same system of coordinates as the IS curve. It is proposed that the total demand to hold real cash balances or $(M/P)^d$ is equal to a function of income Y and interest rate r. The higher the Y, the higher the pre-income exchange demand for money. The higher the r, the lower the post-income reservation demand for money, that is, the more hoarded cash balances will be directed into the loan market, lowering the demand for money. $(M/P)^d$ then is positively dependent on Y and negatively dependent on r, e.g., $(M/P)^d = 0.5Y - 200r$. There are three unknowns and one equation. In principle this requires a three-dimensional graph. We can dispense with such an inconvenience, however, since for a given Y, there is a 2D graph linking real cash balances with the interest rate. Draw a number of such parallel lines for

different *Y*s as in Figure II.7.2(b). Now instead of keeping *Y* fixed, keep the money supply M^s/P a predefined constant, draw it as a vertical line, and see what happens when the total demand to hold cash balances equals the total supply of cash balances to be held: $(M/P)^d = M^s/P$. Again *Y* becomes a function of *r*; for example, if $M^s/P = 2{,}000$, then

$$Y = 4{,}000 + 400r. \text{(Eq. II.7.3)}$$

Eq. II.7.3 is an upward sloping LM curve, showing us all the combinations of (*Y*, *r*) at which the "money market" is in equilibrium. If income increases, then there is a shortage of money at the old *r* (meaning that quantity demanded is greater than quantity supplied), and only a higher interest rate can equilibrate the (variable) demand for and the (fixed) supply of money. If income decreases, then there is a surplus of money at the old *r* (meaning that quantity supplied is greater than quantity demanded), and the interest rate ought to go down in order to raise the total quantity demanded to hold money to such an extent that it is equal to the quantity supplied of money which again is a constant. The two sources of the demand for money will offset each other.

The economic meaning of the IS curve is that when the monetary authority alters the interest rate, the economy can experience a boom, raising real income, or so it claims. It is inflationism in pictures. The monetary policy of credit expansion tries to increase investment without a sacrifice in consumption by printing money. Of course, I did not derive this meaning from the equation of the curve, rather the equation was constructed under the assumption that the money and banking system works as expected. Moreover, since it is a superstructure of the Keynesian cross, it suffers from all the failings of that model.

The economic meaning of the LM curve is this: first, higher income to Smith makes him want to keep more cash, all things being equal. At the same time higher interest rates increase Smith's opportunity cost of holding more cash; in other words, they increase the payoff of lending his money out. Hence they provide an incentive to him to get rid of his cash balance under his mattress or in the bank. Those combinations of *Y* and *r* at which every dollar finds a single willing holder (either in Smith's own hands or in his borrowers') make up the LM curve. The fiscal policy of borrowing and spending tries to increase consumption without a sacrifice of investment by reducing "savings." For the sake of consistency, we can call this the EP (for "Egyptian pyramids") hypothesis.

Monetary policy is manifested in the shift of the LM curve downward and to the right (monetary expansion) or upward and to the left (monetary contraction). The motion of the LM curve is initiated by a change in money supply: remember that our equations require that (*M/*

$P)^d$ be equal to that money supply, and a change in $(M/P)^d$ results in the shift of the curve: $Y = (a \pm \Delta(M/P)^d) + br$. It is assumed of course that a rise in M^s does not in the short run cause a rise in P. Some of the new money is invested and some is hoarded. The money that is to be invested goes into the loan market, lowering the interest rate and raising income (on the IS curve). The people's desire to hoard some of the cash lowers both income and the interest rate (on the LM curve). The two points on both curves thus converge to a new equilibrium.

Fiscal policy is manifested in the shift of the IS curve upward and to the right (government deficit) or downward and to the left (government surplus). When the state "invests" in its public works by borrowing money, and it can borrow a very large amount, interest rates will rise. Some of the money it gets will be from private hoards. It will then, according to the Keynesians, relieve unemployment and raise income. Some of the money the government borrows will be from private consumption which will raise the interest rate and some from private hoards which will raise the GDP (LM). The rest of it will come from private investment which will raise the interest rate and lower income (IS). These forces again push the two values toward equilibrium.

Since any spending by any Smith is automatically income to some Jones, an increase in spending will increase aggregate income and therefore the demand to hold cash. Given also a constant money supply, this entails that the interest rate goes up in order to offset the increase in this demand for money so that the total demand to hold again equals the total supply that can in principle be held. But spending can be by the people or by the government. If the latter, e.g., due to a borrow and spend fiscal policy, then both income and interest rate will rise. That is, the motion of the IS curve upward and to the right, representing government spending, or downward and to the left, representing "austerity," in conjunction with the motion of the equilibrium point along LM, will have a limited effect of changing both the interest rate and income.

When autonomous spending increases, if the LM curve is horizontal, income will be increased, and the interest rate will stay the same; this means that there will be no "crowding out" of private investment. If the LM curve is vertical, then income will stay the same and the interest rate will rise by the greatest possible amount which means complete crowding out. Finally, if the LM curve is normal, then crowding out will be partial, moreover private spending may even increase since income increases along with the interest rate. For instance, let the equation of the IS curve be, as per Eq. II.7.2, $Y = 10{,}000 - 400r$, given $c = 0.75$. The equilibrium between this curve and Eq. II.7.3 lies at (7,000, 7.5). Increasing A_p by 500 will move Y to the right by 2,000. Then

$12{,}000 - 400r = 4{,}000 + 400r$,(Eq. II.7.4)

which means that the new equilibrium is achieved at $r = 10\%$, an increase by 2.5%, and $Y = 8{,}000$, an increase by $1,000 relative to the old curves.

Note that the purpose of monetary policy is to lower interest rates and increase investment without sacrificing consumption; to the extent that income and later prices increase due to inflation, it is an unpleasant side effect; conversely, the purpose of fiscal policy is to increase spending and income, and higher interest rates act as a check on this goal. Fiscal policy is an attempt to increase consumption, thereby letting the firms started upon the previous use of monetary policy earn profits and continue operating. Fiscal policy can operate either by government borrowing that digs at people's hoards or by new money in which case the government and the Fed would be acting in concert.

Under laissez faire, with the CE hypothesis false, income is independent of the interest rate, it cannot be changed because any increase in investment decreases consumption by the same amount. And in the long run, interest rate is independent of income because changes in income are reflected solely in the price level. As a result, under these circumstances we have a vertical and a horizontal curve "determining" the equilibrium (r, Y). IS-LM is a short-run, and short-sighted, macro model at least insofar as it ignores changes in the price level, as well as malinvestment, due to monetary and fiscal policies.

A reasonable question at this point is: So what? Why do we care about this model? We care because it provides a justification for central bank / government activism: by manipulating government spending and inflation, we (and by "we" I mean a central planner endowed with all the power in the world) can apparently achieve any GDP and interest rate we want.

For example, Gordon (2009) claims that Japan could escape its economic woes by pursuing both monetary and fiscal policy together in such a way as to get the government to spend by borrowing from the Bank of Japan. Now the Japanese interest rates are already extremely low, and Japan's government debt is huge. It would seem that all is lost. Not so, says Gordon. By moving both the IS curve and the LM curve to the right, income will rise but the interest rates with proper calculation need neither increase nor decrease. Moreover, by borrowing from its own central bank, Japan will not be increasing public debt but instead generate inflation. But inflation would be the least of the possible evils. (118) Thus, by cleverly varying policy alternatives, such as from whom to borrow, economic progress can proceed at a more or less steady pace.

Just as the combined forces of the central bank and government can keep the interest rate stable while changing the GDP, so they can target the GDP and manipulate the interest rate. The way toward the

exercise of that power lies, e.g., in shifting LM to the left and IS to the right. Before the shifts, at the lower interest rate, there is more (private) investment and less (government) consumption; after the shifts, at the higher interest rate, there is less investment and more consumption. If the government, instead of consuming its share at the higher *r*, "invested" it into "infrastructure" and the like, then the choice would instead consist in comparing private with government investment.

Where have we been led by this reasoning? We have arrived at the startling idea that both the interest rate and the GDP are arbitrarily set by the authorities. The market ultimately has no say in assigning values to these variables. But if my reader takes nothing else from this book, then he should understand, über alles, that both the interest rate and the GDP have real market values. They are not undetermined until the central bank and the government mercifully set them to whatever they choose. (1) In the presence of only commodity money (without either fiat or credit money), the interest rate would be set in accordance with individual time and risk preferences, perceptions of entrepreneurs, and the loan market's dynamics. It would have a perfectly definite value or values seen by all market agents. Defying the market rate of interest leads to business cycles and impoverishment as described in Part I. (2) In the absence of taxes, the GDP would be set according to consumer preferences in buying and selling. A fiscal policy requires a partial surrender of consumer sovereignty. Gordon writes about Japanese "roads that lead to nowhere and a report that 60% of Japanese coastline is encased in concrete" (76), meaning that they are economic bads. But presumably we do not want the government to be socialistic. We want consumers to continue deciding what gets produced, of what quality, how much of it, and so on. The GDP in the free market is representative of the level of consumer happiness and is also not arbitrary. Neglecting the market GDP leads to socialism and again to impoverishment. The IS-LM model fails to take cognizance of these points. Indeed, urging the use of fiscal policy on the heels of failed monetary policy is proposing socialism as a remedy for interventionism, a standard procedure among statists.

Consider lastly that fiscal policy operates by *force*, taxing the consumers, and monetary policy operates by *fraud*, deceiving the entrepreneurs. It is a staple of some of the most respected political philosophies that the main or even only task of government is to protect the citizens from force and fraud. It is clear, however, that the government itself, in pursuing its "policies," is perpetuating an extremely impressive use of violence and deception. Without making any value judgments, it is a fact that there cannot be a "limited" government so long as the policies are considered by the academics, the opinion-molders, and the public to be, far from destructive, in fact

essential to the commonweal. A combination of the fiscal and monetary policies when taken to their logical conclusion – and why not increase the GDP to infinity and decrease the interest rate to 0? – ensures than nobody will know either *what* to produce or *how* to produce it. Precisely because it is usually *not* taken to such a conclusion, *Keynesianism is Marxism lite*. For that reason, some of the most valuable contributions of the Austrian school of economics are its theory of (the impossibility of) socialism and its theory of business cycles. IS-LM is quackery.

8. That low business confidence, liquidity trap, and crowding out obstruct the "policies"

The IS-LM model can show the limits of both the monetary and fiscal policies. It does not exhaust those limits – in fact I have made it clear that both kinds of policies are economically ruinous – but gives a framework in which common economic maladies from the point of view of the "policymakers" can be expressed.

Vertical LM. Here monetary policy is strong because all the newly created money is loaned out by the banks and spent by the people on consumption and investment with nothing hoarded either by the banks or by the borrowers. A minimum of money supply inflation is required to lower the interest rate, stimulating investment seemingly without sacrificing consumption, thereby raising income. Thus, credit expansion increases the money supply and lowers the interest rates, but the people do not want to hold any more cash balances than they did in the past. They hoard no more than before. All of the new money is consumed or invested, resulting in a higher GDP and lower interest rates.

Fiscal policy is weak insofar as when the government enters the loan market and bids on the present goods, people loan to it the money that would otherwise be consumed. Interest rates rise, but income remains the same, with government consumption fully replacing private consumption.

Vertical IS. Monetary policy is weak because business pessimism results in people borrowing and hoarding. Interest rates fall concomitantly without any change in income.

Fiscal policy on the other hand is unusually potent insofar as a minimum of government borrowing from the people and spending is needed in order to achieve a given boost in consumption. Only hoards are lent out as people buy government bonds, so the hoards are converted to government consumption. The interest rate rises and quantity of present money lent increases but at the expense not of consumption or investment but rather of hoards. There is as little

crowding out as possible under these conditions because the dishoarding elicited by the higher interest rate feeds the supply of loanable funds.

Horizontal LM. This situation features weak monetary policy and strong fiscal policy. In this case, a large change in the money supply (actuated by moving the LM curve downward and to the right) leads to only a very small change in both the interest rate and output. For example, the banks may be sitting on a pile of money, refusing to start lending it because they are insolvent and expect even more losses. Liquidity is trapped inside bank vaults. New money is not loaned out but accumulates in banks' own hoards. Monetary policy is impotent: the central bank has lost all "control" over the situation.

Fiscal policy in these circumstances is at its most "effective" because government deficit spending will not affect the interest rate and will cause no crowding out. The banks will not lend to entrepreneurs, but they will dishoard and lend to the government, considering this to be "safe." As a result, there is no pressure on the interest rates, but GDP rises. The way out of the Japanese predicament mentioned in the previous chapter then simulates fiscal policy during a liquidity trap. (That does not mean that Japan actually is in a liquidity trap.)

Horizontal IS. Strong monetary policy here presupposes that bankers consume the new money according to their fractional reserves instead of lending it. This generates pure (money supply) inflation and therefore a rise in income without credit expansion with interest rates unaffected. This is also illegal which makes it a vacuous or degenerate case.

Fiscal policy is weak because government borrowing and spending fully crowds out private investment. The government's poking and prodding the economy changes neither interest rates nor income.

In sum, for monetary policy, the bankers can either consume the new money, hoard it, or lend it. If they lend it, the borrowers can either spend it or hoard it. For fiscal policy, the state can borrow from the people or from banks. If the former, the money can be subtracted from the people's consumption, investment, or hoarding. Each of these possibilities is illustrated above.

It is not strictly speaking necessary for these boundary conditions – the IS or LM curve at its extreme – to hold; a monetary policy and fiscal policy at odds with each other will generate similar effects. For example, a fiscal stimulus (in which IS moves to the right) accompanied by a monetary tightening (in which LM moves to the left) will simulate the consequences of fiscal policy under a vertical LM curve. It might be fun to let the government and central bank fight if the "policymaking" spectacle as such were not so revolting.

This is yet another reason, in addition to the fact that the masses foolishly crave credit expansion, why the central bank cannot be

independent of political goings-on. Mutually incompatible and antagonistic to each other fiscal and monetary policies will cancel out or even harm the economy beyond the harm done to it by these policies when they are coordinated.

9. That the term "natural real GDP" is best defined as the GDP prevailing under laissez faire

Gordon (2009) calls *natural* GDP that level of *actual* GDP "in which there is no tendency for the rate of inflation to rise or fall" (5-7). Think of the absurdity of this definition when the rate of inflation is under partial control of the monetary authority. People do not follow "tendencies," they act, and the central bank acts as well. It can at will change the rate of inflation; it can raise it, lower it, or turn it into deflation according to its own designs.

In a boom generated by easy money there is lots of production (much of it in vain) complemented by price inflation in whatever the object of the boom is, such as houses or the technology sector of the stock market. The actual GDP, if too high, Gordon writes, "puts upward pressure on the inflation rate." Of course, it is *money supply* inflation that causes the boom not vice versa. Only then do prices start climbing upward as the market responds to boatloads of cheap credit, generating *price* inflation. At natural GDP, Gordon goes on, the price inflation rate does not change. For how long must this rate be the same in order for the GDP to approach its "natural" level? Is the natural level of GDP simply the average over a single boom-bust business cycle? We are not told. What our author has in mind is that the economy is not being "stimulated" by low interest rates and inflationary monetary easing, nor on the contrary steered toward a recession by means of monetary tightening. But notice that for the natural GDP, according to this definition, to prevail, all that must be true of the inflation rate is that it be constant. Its actual value can apparently be anything at all. Even hyperinflation, if kept at a steady 100% / month growth rate, would yield a natural GDP. What is so natural about *that*?

Some of this might appear to be semantic quibbling. Who cares how the word "natural" is defined? Yet an economy that experiences a constant rate of inflation is not being "left alone" by the central bank. It is not laissez faire. It might make sense to designate the GDP produced in such an ideal free economy, "natural," and consider the GDPs that would result in various interventionist schemes, "actual." *Natural GDP* is the GDP as it would prevail under a system of *natural liberty*, with 100% gold money. This GDP is a pipe dream under interventionism. The

reason is that even a steady rate of inflation depresses the interest rate below the level desired by the people in their capacity as consumers and savers. Any inflation of fiat money can generate a boom. Far from being natural, the inflation rate is artificially imposed on the economy by a quasi-government agency of interventionist "planning," the central bank.

Under free banking, credit expansions and contractions, what we have called secondary deflations or debt-deflations (themselves due to ABCT-style primary collapses), will follow each other, generating a regular series of booms and busts. Under central banking, the Fed arrests the secondary deflation by pumping in new fiat money to replace credit money. This too is sufficient to restart the boom a bit later. Fiscal policy can also postpone debt-deflation by sustaining profits for the zombie companies formed during the boom. None of these things are particularly natural if by that we mean healthy.

Now targeting a low steady inflation rate might be a good idea if we are stuck with our queer banking system. The Fed can target, among other things, either money supply or price level. Both, Gordon argues, however, are hard to control. Money supply depends on banks as much as the Fed. Price level depends on the demand for money as much as on the supply. Thus, targeting price inflation "requires extinguishing reaction to supply shocks, creating highly variable unemployment rate" (472). Since demand for money is Q / V, supply shocks on the goods side correspond to "demand shocks" on the velocity side. We have already seen that 100% gold money will maintain the price level more efficiently than the central bank ever could. Gordon's argument of course is premised on the untenable idea of involuntary unemployment under laissez faire which can only be alleviated by inflation.

The real reason why this policy is implausible is twofold. First, monetary policy is used together with fiscal policy to achieve results consistent with the interests of the state. A simple monetary policy like the one just described will not serve the statist conspiracies. Similarly, and second, a *steady and low* inflation, seemingly a boon, is more or less equivalent in consequences to *zero* inflation. Nothing stops the Fed in the U.S. from freezing all of its open market operations, fixing the reserve requirements and the amount of high-powered money to their present values, and letting the money supply fluctuate only via actions of commercial banks creating and destroying credit money. Of course, this still would not be sufficient to tame the business cycle; moreover, it is not entirely clear whether the Fed can leave the banks alone and abandon monetary policy altogether. Bank failures, secondary deflation are no joke. The additional reasons why the Fed will not do this are (a) political because again the state cherishes its ability to borrow copious amounts of money from the Fed, and (b) ideological because the boom-

addicted public loves its highs.

In short, then, Gordon's definition fails at capturing the essence of naturalness of the GDP or for that matter unemployment rate.

10. That there are difficulties with the concepts of aggregate supply, demand, and equilibrium

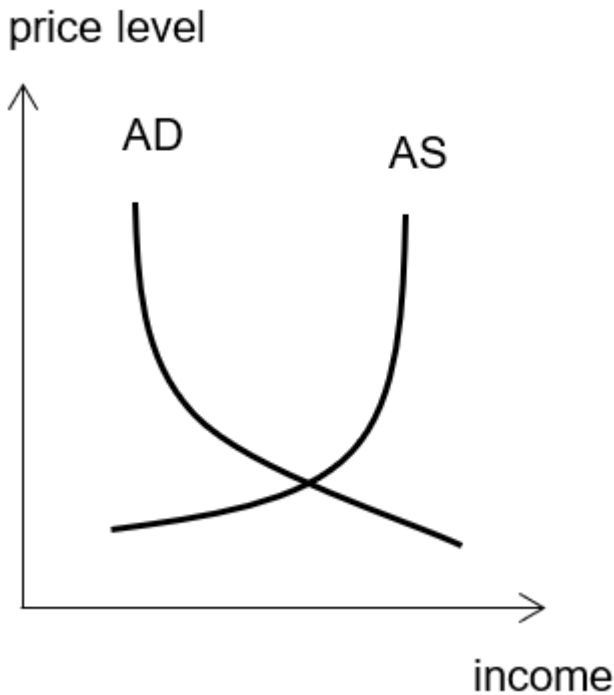

Figure II.10.1. Aggregate supply and demand.

Samuelson (2005) cautions the reader that the microeconomic demand curve for a particular product differs in meaning from the macroeconomic aggregate demand curve. (134-5) The graph of the latter still features a familiar downward-sloping curve with "price level" on the *y*-axis and "real GDP" on the *x*-axis as seen in Figure II.10.1. Immediately we can spot the first difference: the micro demand curve has quantity on the *x*-axis, but the macro curve cannot have that because, it is natural to ask, it would have the quantity of *what*? Heterogeneous goods cannot be aggregated, unless we use something like "the total amount of money that changes hands" or "dollars' worth of goods." This makes the contrast between the two curves even more profound. In the micro curve, the total amount of cash that is spent on

the good being represented is price * quantity or the *x*-coordinate times the *y*-coordinate of any point on the curve. In the macro curve, this *entire* product is placed on the *x*-axis.

The second problem is that money does not "measure" goods. If one were told that the GDP of Ruritania in 2010 was 1 billion rurs, what would he possibly do with this information? Even saying that Ruritania's GDP has increased from 2009 to 2010 by a billion rurs or that the GDP of Ruritania is greater than the GDP of Waldavia by a billion rurs is of no interest unless in addition we bring in the money supply and demand. Even then we would have no way of determining the overall level of prosperity. "Real GDP" then means "total output miraculously aggregated and assigned a dollar value."

Now the fallacy of composition is mistakenly attributing to the whole a property of its part or vice versa. A constituent of a house is a brick and is shaped like one, but the house as a whole does not look like a brick. Keynesians have deafened our ears with repeated assertions that policies that work for a family, such as balanced budget, are not appropriate for the government. Certainly the state is not "really" a family. It is not the case that "we" are the government and the government is "us," or that we are sort of kids of whom the Republican dad and Democrat mom are taking care. Moreover, this is a truism insofar as it is assumed at the beginning of the argument that the government does or ought to possess powers unavailable to a family and (alleged) duties with which a family is not burdened. For example, the government can monetize its debt by borrowing from the Fed. If the common ideology demands that the state prosecute fiscal policy, then government deficits, far from being an outrage, are considered by the public to be fully in the interest of the common good. Thus, the government indeed *is not* like a family, having the ability to tax and print money, but maybe it *ought to be*.

But there is a much less dubious composition fallacy of which the Keynesians themselves are guilty. The price and quantity supplied of an innovative product depend upon consumer demand. From this we cannot conclude that the "price level" and "total output" depend upon "aggregate demand." There are two sides to the distinction. First, Smith sells his labor to person *X* for money and uses the money to buy widgets from person *Y*. Second, in buying widgets, Smith refuses himself trinkets sold by person *Z*: the opportunity cost of enjoying the services of a widget is failing to enjoy the services of a trinket. For aggregate quantities, neither hold: Smith, *X*, *Y*, and *Z* belong to one and the same group. Total output is everything that is *sold* by all members of the economy. And there are no opportunity costs to *buying* everything.

The price of a particular widget on a microeconomic demand curve depends on the will of the business owner, the widget's maker.

But the price level as a whole does not depend on the decisions of anyone in particular, unless we're dealing with a socialist economy run by a central planner. Price level isn't an independent variable, in fact it is not a variable at all but a constant. One can't just change it and observe changes in the GDP. It itself depends on the supply of and demand for money: $P = MV / Q$. But all three of these are held to be equal when constructing AD. Q, in particular, is fixed, so we can't get lower P by increasing the supply of goods. The "wealth effect" is simple: for micro demand, if I have $100 in my pocket and the price of apples goes up, then I'll buy fewer apples and (perhaps) more of other things. But if the price of *everything* goes up, then I'll buy less of everything. Hence the macro GDP will fall. In the first place, demand depends mostly on income not wealth. As for income, price level of course includes both prices and wages, so even if all business owners, as one, somehow up and doubled their prices, wages would double too, and everything would still be sold. As for wealth, it may be that I've been saving for a car all year, and if prices doubled, my efforts would be frustrated. But that sort of dynamic effect cannot be the meaning of AD. Even for wealth, *total spending* (as opposed to quantities demanded) need not be affected, so if that's how we measure real GDP, it will not change. Another idea is that lower price level entails lower quantity demanded of money, hence at low prices people will "feel richer" and dishoard and spend some of their cash balances. But that's neither here nor there if we're keeping V fixed. This also mistakes effect for cause: it is dishoarding that *raises* the price level.

Then there is the "interest rate effect." At lower price level the marginal utility of each dollar as regards its use-value (protection from an uncertain future) rises. But so does the total utility of one's cash balance. Each dollar protects better, but the protection the marginal dollar provides is valued less. At the same time the marginal dollar's exchange-value rises. So one would hoard less and consume more. And similarly one would hoard less and lend more at interest. This lowers the interest rate and increases spending. The same objections as advanced for the wealth effect apply here too.

Finally, there is the "foreign exchange effect." Lower price level in the U.S., for example, means that wages of U.S. workers are low, but not necessarily wages of foreign workers. The quantity demanded of U.S. goods by foreigners will rise. Of course, this will just cause the dollar to appreciate relative to other currencies. But wait. The lower interest rate mentioned above will cause an outflow of capital from the U.S. This will put downward pressure on the value of the dollar on foreign exchange. All in all, exports and the GDP will probably rise. The problem with this argument is that to the extent that the foreign exchange effect is strengthened by the capital outflow, the interest rate

effect is weakened by it. Therefore, the two together are no stronger than each alone.

Samuelson further defends the claim that AD slopes downward by arguing that "there are some elements of income or wealth that do not rise when the price level rises. For example, some items of personal income might be set in nominal dollar terms – some government transfer payments, the minimum wage, and company pensions are examples. When the price level goes up, therefore, real disposable income falls, leading to a decline in real consumption expenditures." (134) But these are merely happenstance, accidental. These payments could easily be indexed to the price level. And what of simple wages, rents, and interest which constitute the bulk of incomes to factors? The minimum wage, etc. seem like an embarrassing excuse. Moreover, this isn't a dynamic reasoning where we start with one P and GDP, raise P, and observe a decline in GDP because some wages are slow to adjust. Such an exercise won't even work: presumably, the prices rise due to higher M, e.g., the government sends everyone a large "stimulus" check. But surely this will *increase* consumption. The only way to make any sense of AD is to assume that *all* wages are rigid and thus exclude them from the price level altogether. In this case we don't need any other arguments which seem to try to backpedal from Keynes.[2]

The aggregate supply curve is plotted on the same graph as the aggregate demand curve, and its short-run version looks like a regular micro supply curve. It must therefore relate the price level to output or GDP = dollars' worth of goods. But what is the causal link? Why do higher prices cause greater output? Because of the money illusion: a rise in the prices of consumer goods due to money supply inflation unaccompanied by a rise in money wages will, given prior "involuntary unemployment," increase hiring and hence output and GDP. Such is the flimsy foundation for this curve. It would seem then that both the price level and the output are functions of yet a third variable, namely, the money supply. This is very different from the micro supply curve in which the fundamental law of marginal utility explains why higher prices lead directly to greater quantity supplied. Therefore, the aggregate supply curve as drawn in most textbooks must be represented as a set of two parametric equations: price level = $f(t)$ and output = $g(t)$, where t is the money supply. The long-run aggregate supply curve is a vertical line, indicating that changes in the money supply are reflected solely in changes in prices (as opposed to both prices and output). (Money may be neutral in the long run, but a lot tends to happen in the long run to make the state of the economy with inflation different than it would be without inflation even in the long run. The long run, given monetary manipulation, is like the equilibrium: the economy tends toward it but never reaches it.) The Keynesian view, as

we have seen, is that outside full employment, short-term inflation can boost both employment and the GDP.

Another alleged reason for upward-sloping AS is misperception of the rise in the price level due to money supply inflation by businessmen as a local spike in demand for their particular products. But this causes no general increase in production either: businessmen whose selling prices rise before their buying prices (costs of production) do can temporarily expand, but those whose buying prices rise before their selling prices do must temporarily shrink production. Money supply inflation causes demand-pull price inflation for first recipients of new money, cost-push price inflation for last recipients. Further, in the short run inventories can be depleted which seems like a boon to the consumers, but they will later have to be rebuilt which means that there will be production that does not result in sales, so resources will be used without increasing human happiness. The initial freebies will be fully offset by later hardship.

There may be a temporary trade-off between *money supply* inflation, which will set off a boom when manifesting through credit expansion, and unemployment, but no trade-off between *price* inflation and unemployment under laissez faire. (In fact, when general price inflation hits, the boom will end.) If then there is no perpetual reserve army of the unemployed who cannot find work because labor unions recklessly fix wages above market-clearing values, then the short-run AS curve becomes "classically" vertical.

Macro textbooks seem to teach man-in-the-street economics. Gwartney (2018) argues in a discussion of AS/AD that "an increase in the interest rate will discourage current consumption by making it more attractive to save and more expensive to borrow. … Lower interest rates will have the opposite effect." (191) This reverses the cause and effect. It is precisely because people's time preferences have changed such that they prefer to consume *more* and save less that the interest rate rises. It's true, however, that if the government engages in credit expansion and lowers the interest rate artificially, then the people will respond by consuming more and saving less, thus driving the interest rate somewhat higher. Again, "a fall in the interest rate makes both consumer and investment goods cheaper" (200). The opposite is true. The capitalized value of a good is the future income it generates discounted by the rate of interest; if the rate of interest falls, this value rises. What the authors mean is that it will be cheaper to borrow money with which to buy capital goods. But the increased demand for such capital goods will raise their prices. Of course, we have to take into account the fact that if the fall in the interest rate is due to the decisions of the people to consume less and save more, then consumption will decline and so will the prices of capital goods used in the late stages of production. Some capital

goods will fall in value, others will rise.

Consider a situation in which the price level is above the aggregate supply / aggregate demand "equilibrium." In the micro world, it would mean that the price is too high for the market to clear and that more mutually beneficial exchanges can be made at some lower price. In the case of barter, when apples are exchanged for oranges, say, each item has both use-value and exchange-value, and this fact restricts the number of exchanges that will be made. In indirect exchange, any amount of cash can be spent on numerous sets of goods all competing with each other for this amount. But the meaning of our macro graph is far more obscure, if it exists at all. The price level comprises *all* prices. It is only the *relative* differences in the prices of goods and services that underlie the network of exchange, opportunity costs, and the like. But there can be no opportunity costs in the macro framework such as use-values (in barter) or other goods on which one's income can be spent (in a money economy).

What does it mean to say that at price level equal to 200 (whatever that means), there will be $3,500 billion dollars' worth of goods brought to the market but only $2,500 billion bought? If not all goods are sold, it means that their prices *relative to other goods* are too high. A simple interpretation is that at such a disequilibrium price level the "rigid" wages and hence incomes to workers are too low to buy everything that's produced. Now at this level of prices either there is involuntary unemployment or not. If there is, then wages are indeed too *high*, and everything that's produced is still bought. If there isn't, then wages are just right and not rigid at all at still higher prices and so are part of the price level for AS and therefore, to be consistent, for AD, and again there is equilibrium. Another possibility is that it's a *monetary* or PL disequilibrium. People are hoarding money increasing the demand for it, or a credit contraction is occurring decreasing the supply, which puts a downward pressure on the price level. But PL disequilibrium should be modeled with a graph of the supply of and demand for money, not AS/AD. And as we have seen, this has practical significance only in secondary deflation during a bust. Nor is monetary disequilibrium a sign of any overproduction or general glut. Otherwise, there is no such thing as an excessive global price level at which aggregate supply exceeds aggregate demand. AS and AD are just everything that has been produced in a given year and everything that has been consumed (at the price level determined by the equation of exchange). Barring microeconomic surpluses and shortages, these values are exactly the same.

If we were dealing with the aggregate demand for and supply of, say, labor (as opposed to everything), then we might be able to make statements like "wages are too high relative to prices (or marginal

productivity) to employ everyone willing to work at those wages," and therefore the quantity supplied of labor exceeds its quantity demanded. Even that, however, is hardly meaningful: it is not that the "price level" is misaligned with the "wage level" but that various individual wages are not justified by the individual prices of goods toward whose making the various particular workers want to contribute. On the other hand, for AS/AD no meaning can be attached to aggregate disequilibrium.

The textbook doctrine of the determination of the rate of interest is extremely primitive, claiming that the equilibrium interest rate depends on the supply of and demand for money. It does not mention time preferences, or how changes in the supply of and demand for money merely cause the rate of interest to deviate from its natural rate temporarily. What matters for the interest rate in the long run is saving out of the *flow* of income, not hoarding out of a *stock* of cash. AS/AD, on the other hand, is too clever for its own good. There are no curves, there are just two identical points.

Finally, if we call the AS curve the set of points relating the price level and GDP to money supply, then the AD curve, in order for it to have any meaning, must be defined differently, as well. I am not ingenious enough, however, to rescue this paradigm from its apparent absurdities.

11. That underconsumptionism is nonsense

All underconsumptionist theories of the business cycle claim in one way or another that the goods being produced cannot all be sold at a profit. Different reasons are given for this unfortunate situation. Usually the fault is found in oversaving, specifically too much saving-for-the-sake-of-investing or too much saving-for-the-sake-of-hoarding, or some idea that the workers don't have enough "purchasing power" to "buy back their own products."

Underconsumption Theory #1. Bleaney (1976) describes an early argument as follows: "increased investment implies reduced demand, and since it also implies increased supply, the result must be overproduction" (40). But the normal morphing of the production structure due to the desire by the people for economic growth does not constitute underconsumption or lead to a business cycle. The rate of interest set by the market determines the distribution of effort to produce for the more and less distant future. The reduced consumer demand *now* is a *means* to an increased supply (and demand) *in the future*. There is under laissez faire no general underconsumption or overproduction because both consumption and production faithfully reflect consumer desires and hence are neither deficient nor excessive

from the welfare standpoint.

It's true, as J.A. Hobson argues, that there are definite technological relations within firms between consumer goods, factors, and methods of production. But these *technical* relations do not entail any "right" *economic* proportion between saving and spending in money terms. It's also true that demand for capital goods is derived ultimately from consumer demand, and a diminution of this demand due to saving will pro tanto reduce the demand for the factors being used in old ways. But the investments financed by the new savings are usually precisely in *different* and for various reasons more efficient methods of production. Technological relations are always changing, and as a result demand for other factors will rise. The price level as a whole may fall with time due to greater prosperity, but no "depression in trade" due to "a general fall in the rate of incomes" (Bleaney 1976: 156) will ensue.

Underconsumption Theory #2. A comparatively lower social rate of time preference means that people are willing to sacrifice present pleasures for a smaller increase in future ones. Suppose that, spurred by a high supply of savings, entrepreneurs have invested into more roundabout and more physically productive processes. At long last, a time comes when the public is able to enjoy the fruits of postponing their consumption. To everyone's surprise, however, by the time the consumer goods have matured and are about to hit the market, time preferences fall once again, and the demand for the very consumer goods for the sake of which past sacrifices were made falls as well, and the savers make it clear that still more roundabout processes ought to be started. The present goods cannot be sold but at a loss. As a result, firms reduce production or go out of business, triggering a recession.

Now if the change in time preferences is not foreseen, then it is true that the marginal companies whose production processes are in operation will suffer losses. But why assume that? Hobson argued that the "rich" tend to save a higher proportion of their income than the "poor." He was probably right about that. However, he takes this fact to mean something quite peculiar. During expansions, he claims, the rich get richer faster than the poor get richer. As a result, the overall time preference rate falls. The companies which have labored to produce the future (and now present) goods are deceived. The consumers tell them that they want to devote still more resources to investment and to increasing productivity. Again there are mass losses and a recession.

The claim here appears to be that the rich continue to save presumably for the sake of compound interest yet end up never consuming. But in that case, if the rich continue to reinvest their profits, they refuse to compete for present goods with the workers. The workers then benefit until in some distant future the capitalists finally spend their income on consumer goods. But that does not mean that *all*

capitalists will take losses, though some might, what it means is that the production structure will keep lengthening. But must anyone take losses? Entrepreneurs need not be making such mistakes if they are aware of the trend in time preferences and interest rates. If the reason for diminishing time preferences is known (especially if Hobson's theory both is true and has been popularized), then why wouldn't the entrepreneurs take it into account in their calculations? We should generally be able to trust them to anticipate the new interest rates and the demand for their products and to produce just enough goods to satisfy the present desires of the consumers at precisely the time when the goods are ready to be sold and no more. A decisive objection, however, is the following. Being rich means reveling in lots of consumer goods. But while longer projects are being rolled out, *no one* is getting richer. In order for the still lower time preferences to arise among the wealthy, these folks must enjoy a higher quantity of present goods. *Some* consumer goods, in fact a greater amount than before, *will* be sold. So, this theory fails.

Underconsumption Theory #3. There is such a theme in *General Theory* insofar as Keynes worries about hoarding diminishing the "propensity to consume" and reducing the multiplier. This has been dealt with earlier. Another of his ideas has to do with sinking funds. I refute it in (I, 22).

Underconsumption Theory #4. Take a look again at Figure I.30.1 which represents an evenly rotating economy. It is claimed that the workers in stage 6 can't buy back their own product. Well, of course they can't because only $170 of the total expenses of $1,000 of the entrepreneurs operating in stage 7 is spent on the original factors of production of which labor itself is only a part. The rest goes toward produced factors – materials, machines, goods-in-process – obtained from the capitalists producing in the previous stage. However, since all capital is reducible to the original factors, namely, labor, space, time, nature, and natural resources, the amount of money spent by *all* the factors in the ERE *eventually* necessarily equals the total consumer expenditures. All the factor owners *combined* can buy back everything they have helped to produce.

Underconsumption Theory #5. It is observed that payments to factors in Figure I.30.1 precede the creation of consumer goods. Therefore, the factor owners spend their income on whatever goods are available *at the time*, and when the new goods finally become available sometime later, they have no money with which to buy them. It is true that future production is sustained by the current stock of consumer goods. The workers who receive present money spend it on immediate pleasures. In the first place, money does not disappear from the economy unless it is hoarded or destroyed (e.g., by banks, when the

loans they advance are repaid). Somebody will end up with the cash with which to buy the newly made goods. In addition, production goes on day in and day out. After the very first goods made within the entire industry mature, every stage exists simultaneously with all the others such that when the goods in stage n are ready to be sold to the next capitalists, so are the goods in stage $n + 1$. If we call the entire 7-layer structure of production in Figure I.30.1 a "round," then it is hardly ever the case that an industry exists for a single round and then disappears. The factors therefore receive income continuously, and this enables them to buy goods at all times. Even if, per impossibile, capitalists were to liquidate their investments and curtail production, it would be they rather than the workers who would consume the last goods they made.

Underconsumption Theory #6. Called by C.H. Douglas the "*A* + *B* theorem," it describes the payments made by a firm as consisting of two groups, namely:

> *A* payments, which are all payments made to individuals, such as wages, salaries, or dividends; and *B* payments, which are payments made to other organizations for machinery, raw materials, interest on bank loans, and so forth. (Estey 1956: 226)

Unlike *A* payments, *B* payments do not add to the income used by the consumers to buy the final goods. And yet both *A* and *B* payments enter into the price of the final goods. Hence, underconsumption. This argument is guilty of double counting, adding both the white and shaded areas of Figure I.30.1, and failing to take note that all payments to capitalists, as we go back in time, are split up into profits (if not in the ERE) and income to the original factors.

Underconsumption Theory #7. Some Marxists have alluded to progressive immiseration of the proletariat to ground this idea. In the first place, the "proletariat" is richer than ever. But even if the workers were getting poorer, wouldn't production decline pari passu with consumption? For whom, after all, are the capitalists producing? Who will be the source of their sales revenues? If the capitalists are somehow hogging all the money, then it will be they who will be consuming. Again there is no overproduction. The whole thing is rubbish.

If the underconsumption theories have any grain of truth to them, it is that entrepreneurs make errors. They produce goods which they hoped to sell at a profit but now find their old plans dashed. But their losses "are not caused by a general abstention from buying on the part of the public; they are due to the fact that the public prefers to buy other goods" (Mises 1996: 301). It's not underconsumption but getting outcompeted. Out of SD, (bad) RC, and PL disequilibria, only RC (i.e., business losses) represents production rather than pricing errors. No other sense of overproduction is tenable. But the existence of a normal

or nonanomalous rate of entrepreneurial attrition is not a reason to find naive underconsumption theories of the business cycle any more plausible.

On the other hand, in a business cycle there is not under- but indeed overconsumption, the consumption being in excess of what would be needed to turn the malinvestments made during the boom into good investments. Too many things are *attempted* to be produced, yet too few things *actually* are produced, signifying not that people are not consuming but insufficiency of real capital: factors of production are too scarce to enable any significant number of projects to be completed and the goods to be sold at a profit.

12. That business cycles cannot be blamed on changes in risk preferences

The business cycle theory described briefly in an introductory textbook (Bade 2009) is this. Autonomous consumption is defined as that consumption which would occur even if one's current income were zero: "This consumption expenditure would be financed either by spending past savings or by borrowing." (358) "An expansion is triggered by an increase in autonomous expenditure." In other words, savings are spent, the multiplier effect comes to the fore, and this boosts the expansion still further. On the other hand, a decrease in autonomous expenditure must cause a recession. (374)

This argument depends on the assumptions of rigid prices and the efficacy of the multiplier, but perhaps we can adapt it for our purposes. Dishoarding will add to both consumption and investment and perpetrate two economic deceptions: fake profits to existing entrepreneurs (meaning that *relative* demands have not changed) and fake signals to investors to reshape the structure of production (because the lower interest rates are temporary).

Note that there is an asymmetry between hoarding and dishoarding. Windfall profits generated by dishoarding are enjoyed by the entrepreneurs in the short run and disappear only in the long run as the entire price level adjusts one commodity after another. But losses generated by hoarding are equilibrated immediately because it is possible for the affected businesses to lower wages as we saw in (I, 42). So, dishoarding has a stimulative effect on production, but hoarding does not have a depressing effect. Previous hoarding then cannot be a cause of depression that current dishoarding alleviates.

A firm adapts to an increase in the demand for its product in three steps. First, it raises prices so that existing inventories can be cleared out in an orderly fashion. Second, excess capacity within the firm is filled. Third, if the change in the demand is foreseen to be

permanent, provisions are made to boost production for good. It is claimed that the second step, when made by numerous firms at the same time due to activation of hoarded cash, initiates the boom. The third step is never reached. Lower demand for money by the consumers is complemented with lower demand for money by the workers. Hence in the longer run productivity falls (because workers are unwilling to exert themselves as much for a given wage) or wages rise, catching up with prices. Producing at the limit becomes too expensive as workers demand higher wages to forgo leisure. Costs increase and supply is lowered. The shot in the arm of production wears off. Thus, Q goes up temporarily in the short run, while in the long run P goes up permanently (barring future changes in V), and Q goes back to its previous level, thereby moving in a kind of arc. Similarly, when the velocity of circulation of money decreases, the price level does not adjust downward instantly but is preceded by a decrease in output which, as P moves down, again at some point rises to its previous level. In other words, changes in V affect the demand for money and through it the price level only in the longer run. These paroxysms of demanding money more or less, and of hoarding and dishoarding, it is argued, are a source of business cycles.

The second illusion, lower interest rates, can be folded into ABCT. If inflationary credit expansion can cause the business cycle, then why not dishoarding according to the same mechanism?

Sudden changes in time preferences *might* occur but only rarely (mainly as a result of wars, natural catastrophes, etc.) and would indeed trigger an economic recession. Similarly, sudden and large decreases in the demand for cash balances can set off a boom. The boom can be cut short by an equally unpredictable and large *increase* in the demand for cash balances.

This theory fails for three reasons. First, demand for money does not change often, rapidly, or by a great amount especially in the world economy on the global level, so it does not explain actual business cycles. All change happens on the margin. The margin can be smaller or larger, but it is rarely great enough to be depression-causing. Greater anxiety follows on the heels of objective mass losses. It does not on its own *cause* the losses. Neither of the two deceptions, the increased profits and lower interest rates, are empirically powerful enough to cause any significant real mischief.

Second, a decrease in the money demand causes prices to rise unevenly and arbitrarily, subject to no rule other than people's spending desires. A Cantillon effect is that the businesses upstream from the spread of newly activated money experience higher demand before they see higher costs and profit, while businesses downstream from it experience higher costs before they see higher demand and lose. Overall expansion is not possible, so it's true that the third step above will be

checked. But the second step means that factors and workers in temporarily winning companies will be asked to work longer hours and enjoy less leisure, while in the temporarily losing companies they may be laid off. This is not important enough to worry about even in the short run and there will be no cycle either. Thus, companies may indeed expand and then contract, depending on the "frequency" and "amplitude" of the oscillation of *Q*. But there is nothing here that indicates an uneconomic misallocation of resources. The boom is harmless, light, and so is the recession (in which as *P* rises, *Q* falls because factors are becoming more expensive and to be employed less with excess capacity restored to its previous level). There is no cluster of errors anywhere in the structure of production, nor reason for mass losses and bankruptcies. We have rather merely normal entrepreneurial adjustment of the production structure, processes, output, and prices to changes in consumer tastes, in this case tastes regarding the consumers' choices of allocating their money holdings toward consumption, investment, and hoarding.

There may not even be any real changes in the underlying business reality: the whole point of having some unused capacity in one's firm is to be able to deal with fluctuations up in demand; and of having some cash on hand or access to credit, to deal with fluctuations down. This cushion will mitigate the deception. It is *possible* that some firms will be tricked into attempting to expand or contract permanently due to the slowness of the rise of the price level. This will entail possibly costly shifts of resources from the contracting firms to the expanding ones and then back. But it won't cause the *mass bankruptcies* for which the actual business cycles are so famous.

It is true that if the dishoarded cash goes into the loan or stock market, the interest rate may fall. In the first place, the magnitude of this effect is nowhere near that of credit expansion. And second, under modern banking there is little distinction between demand and time deposits – the banks loan out everything, so the only way practically to dishoard is to put your physical cash in the bank. This again is too trivial to cause any serious concerns.

Finally, the alleged cause of the cycle here is generated by a change in subjective preferences of the buying public. There need not be any pattern to it: the "booms" and the "busts" will be occurring entirely randomly and chaotically, something which is not true of real business cycles for which we can discern intelligent design. It is the money supply, not demand that's the culprit. I must conclude that this theory is of little interest to economics.

13. That the accelerator principle is a

red herring

Paul Samuelson (2005) asserts mysteriously that "growth stimulates investment." "An investment will bring the firm additional revenue if it helps the firm sell more product." Investment is determined by several factors one of which is "the overall level of output (or GDP)… When factories are lying idle, firms have relatively little need for new factories, so investment is low. …investment is very sensitive to the business cycle." (119) Notice how Samuelson shifts from the point of view of an individual company to the point of view of a macroeconomist looking at the economy as a whole, begging the question. Apparently, what our author means is that during a depression, there is less investment than there is during a boom. From Samuelson's own Keynesian point of view this is true: in depressions, aggregate demand which is composed of at least consumption and investment is low, though for reasons unknown. From the Austrian point of view this is quite obvious as well, given that a depression is marked by *liquidations* of bad investments.

Samuelson goes on: "According to the accelerator principle, rapid output growth stimulates investment. High investment in turn stimulates more output growth, and the process continues until the capacity of the economy is reached, at which point the economic growth rate slows." (130) What a jumble! With respect to (a) a single firm, when producing more output is profitable, e.g., given at least that the demand for the firm's product increases or that costs decrease due to greater internal efficiency of operation by the time the output is ready, the company will invest into new factors of production. (i) *Expectations* of profits cause investment which, if the profits are realized, *may* result in greater output for longer than a single round of production.

With respect to (b) the economy as a whole, I must be dogmatic and propose that the causal arrow goes in the opposite direction: (ii) growth itself depends upon (1) savings which (2) are channeled into real investments into longer production processes which (3) turn out to be profitable. The "capacity of the economy" is determined by its level of population, size of the connected market, people's time and risk preferences, technology, quality of the entrepreneurs, state of capital accumulation, and government policies.

(iii) I grant that growth due to disequilibrating entrepreneurship stimulates investments by imitators and therefore equilibrating entrepreneurship.

(iv) In addition, during the boom phase of the business cycle, unsustainable growth feeds upon itself, giving an incentive to people to invest in hopes of timing the market just right so as to reap the profits before the crash inevitably comes. This is the stimulation of investment

by growth that Samuelson has in mind, but it is a vicious one and has no place in a healthy economy. It's not even growth but a futile and pathetic *attempt* at growth. This attempt will be reversed, and the investment shown to be misdirected.

Samuelson goes on to describe the technology stocks boom in the 1990s in the naivest way imaginable. There was, he says, "speculative frenzy" incited by promising new technologies: "people were lining up to buy shares in companies that were incurring large losses and sometimes had virtually no sales." Why people were so irrational is unclear. Mysteriously, however, "investors became skeptical about the real value of many of these firms. Losses piled up on top of losses. The urge to buy the stocks before they rose higher was replaced by the panicky desire to sell before they fell further." (130) That's it! An unexplained and unexplainable surge and then waning of the animal spirits. *That* is what caused the 1990s business cycle. The problem is that this is a pseudo explanation. Samuelson accounts for neither why the boom commenced nor why it fizzled out. (1) Technological progress always outstrips the economic kind; there is always a bundle of hot technologies out there whose use for the time being is uneconomic. Why would the internet spark a "frenzy"?

(2) There is nothing in Samuelson's theory that necessitates that the optimistic expectations of the entrepreneurs must be eventually upset or turn into pessimistic expectations. The Austrian theory presented in Part I adduced *reasons* for why a boom brought about by artificial credit expansion cannot last: it is self-unwinding, containing in itself the seeds of its own destruction. Its essence is neither psychology alone nor real factors such as technology alone but a temporary "Corrupt Interest Rates" spell cast by the banks on the entrepreneurs which charms them, to their own misfortune, into disregarding the wishes of the consumers. In a similar spirit, Paul Krugman (2009) attributes the Argentine crisis of 1995 to the onset of the Mexican crisis despite the fact that the two countries had "few direct trade or financial links" (48). The relevant connection for Krugman is pure investor irrationality. "Nervous" investors were apparently unable to distinguish between the Mexican peso and the Argentine peso. This is yet another attempt to ascribe mass folly to people who have been entrusted with managing billions of dollars' worth of assets for no reason whatsoever. There is absolutely no evidence that such massive entrepreneurial errors can happen simultaneously by a sheer coincidence. The alleged imbeciles who treated Mexico and Argentina the same way would have been a huge profit opportunity for the more discerning investors.

The accelerator principle mentioned by Samuelson is a curious beast. It states that increased demand for consumer goods causes a more-than-proportional increase in the demand for capital goods, *and*

therefore there is no need for voluntary savings! (Keynesians do not trust the market with supplying the right amount of savings.) The reasoning appears to be something like this. Let there be "involuntary unemployment." The government "invests" into public works or some such thing. Call this, following Hicks (1950), *autonomous* investment. According to the multiplier, this raises employment, income, and consumption. The rise in consumption makes the consumer goods industries want to expand and so itself causes new investment, call it *induced* investment. Thus, the initial investment is "accelerated." Consider Samuelson's own example: let it be that company *X* maintains its capital stock consisting of 20 machines at 2 times the total sales and replaces 1 machine used to produce its output per year. Thus, if the revenues are $30 million, then $60 million is invested into capital goods, and gross investment is $3 million / year. If revenues increase from one year to the next by 50%, say, from $30 million to $45 million, then the number of the machines ordered in that year must also increase by 50%, from 20 to 30, and therefore 11 machines will be ordered (rather than a single replacement machine), a 1000% rise in this derived investment demand! Hence, a boom. The recession will come in the following years as the consumer demand stabilizes and the demand for replacement machines drops to normal levels.

The multiplier increases employment of labor, the accelerator increases investment into machines or more generally fixed capital complementary to labor which in turn increases consumption and on it goes in expanding circles. This model is a magical not scientific mechanism because it tries to get something (increased production) from nothing (monetary injections). But if wages and prices are flexible, the multiplier is unnecessary because full employment is the order of the day; if they are not, it is futile. Nor can the multiplier resolve the resource misallocations revealed during the bust, etc.

Hicks keeps saying that increases in "output" induce investment. This may sound like gibberish. It seems rather that higher consumer *demand* for certain goods gives firms a reason to *invest* in hopes of expanding, which boosts *output*. Perhaps he means that output increases immediately due to *existing* machines working overtime which is less profitable than ordering new machines. Or perhaps he means that output increases due to autonomous investment through the multiplier. In that case output picks up first because workers are hired as prices and wages harmonize a little bit better through inflation. If there was excess capacity in the economy with idle equipment sort of waiting for workers, then there will be no acceleration. If there was no excess capacity, then existing machines will be overworked. This supplies the impetus for the expansion. If machines cannot be worked overtime, then, as we saw in (I, 44), entrepreneurs will earn profits. Then

imitators will produce more capital goods.[3]

It's true that if we assume that some initial mass unemployment is being remedied, then expansion of both consumption and investment is possible at the same time. But getting closer to full employment will not by itself cause a recession. Entrepreneurs will deal with changing demand for machines with the same competence with which they deal with all other fluctuations.

If, on the other hand, the assumption of involuntary unemployment is withdrawn, then higher consumer demand for *X*'s product can come from other consumption, investment, hoarding, or new money. If from new money, then the events will result not in any multiplier-accelerator but in a boom described by ABCT. If from hoarding, then the increase in the demand is only temporary, and *X* should not expand; hoarding was dealt with in (II, 12). If from investment due to higher time preferences and higher interest rates, then far from generating a boom from accumulation of capital, there will be destruction of capital as efficient time-consuming techniques are abandoned. It is true that in the late stages of the production structure the derived demand effect dominates the higher interest rate effect. What is *seen* is higher investment into those later stages, including indeed by *X*. What is *not seen* is less investment in the early stages of the production structure and less gross investment on the whole. Finally, if consumer demand simply switches from *A* to *B*, the idea may be that *B* may order new machines immediately, but *A* will simply allow its machines to depreciate over a long period of time. It's not as if *A*'s now useless machines could morph into *B*'s machines. Since *A* can buy less raw materials, goods-in-process, and labor, this only applies to durable goods. So there is a spike in the demand for the machines. The reply is that in a large economy shifts in the demand due to changing consumer tastes, and the resulting investments into new machines and disinvestments out of old ones, will offset each other or cancel out. No recognizable business cycle will occur.

The accelerator principle, as a theory of business cycles, proves too much, namely that changes in consumer demand, which occur all the time as a consequence of individual choices, should result in chaotic and destructive daily upheavals. But this isn't our experience, and the theory fails to explain actual business cycles which have a definite pattern to them.

14. That the "Keynesian business cycle theory" does not explain business cycles

Thomas Hall's (1990) model reveals the emptiness of Keynesian reasoning. Hall certainly writes in admiring terms about the master: "any list of great economists must include John Maynard Keynes" (48). But he is content with so little theory that I am embarrassed to evaluate his rendition of it.

Apparently, we start in an evenly rotating economy. Somehow a slew of entrepreneurs suddenly perceive numerous profit opportunities, especially by investing into durable goods that take a long time to build. At this point the "animal spirits" are high. The multiplier is doing its allegedly holy work, spreading prosperity around, "increasing aggregate demand and output." Unfortunately,

> the time to build characteristic of capital goods is why the expansion eventually ends. As the expansion progresses, great quantities of new capital goods come on line that were planned some time in the past. The marginal efficiency of capital declines as a result of this abundance. Office buildings are "overbuilt" in the sense that developers have difficulty renting the available space. Subdivisions of houses and apartments lack buyers and renters. Because these investment projects are now less profitable, firms' demand for investment goods declines and the multiplier and accelerator work in reverse. Consumer and business expectations about the future become more pessimistic, putting downward pressure on consumer durables and investment demand. This overall decline in aggregate demand drives business inventories above their desired levels and causes firms to cut production. (60)

Some observations are in order. (1) Hall clearly postulates that of all the projects thereby started many turn out to be unprofitable. We are not told why. Entrepreneurial errors occur all the time, why is there a cyclical pattern to them? In other words, why are losses suffered en masse at the same time?

(2) That an investment "takes time" to be transformed into output is such a primordial phenomenon as to be directly imputable to the axiom of human action; how can such an archgeneral fact be the cause of highly particular events like business cycles? "$2 + 2 = 4 \rightarrow$ business cycles occur" is a true conditional, but few would insist on its usefulness. Hall seems to believe that "investment projects are now less profitable" simply because there are so many of them, resulting in a natural price deflation. A lot of entrepreneurs and their products compete with each other for the consumers' money. Hence before the deflation reared its head, their costs were high yet now revenues are lower than anticipated. In the first place, an actual business cycle is marked not by prosperity and abundance of goods but by a lot of blood,

sweat, and tears that yield nothing. But let's, arguendo, assume Hall's understanding.

First, gold mining (if we're blessed with free-market money) will act as an antidote to the deflation. Second, in the next production round everyone's costs of doing business too decline. Third, *every* entrepreneur faces the deflation, so no particular entrepreneur is disadvantaged relative to everyone else. Scarcity of the factors of production is duly accounted for, hence no vicious malinvestment or resource misallocation occurs. In other words, when people save and invest, they signal their willingness to endure privation over the period necessary to build the novel capital goods, thereby allotting enough time for production to be completed. Fourth, it is quite possible that an entrepreneur's contemplated product would be superior to what exists now, but it may well be inferior to what will exist one year later when his product is finally out. In such a case his losses are well deserved. Fifth, the equation of exchange must be used with care since V includes in itself both consumption C and investment I and conceals their ratio, the structure of production, and the interest rate. By increasing I at the expense of C it is possible to raise Q. Prices of consumer goods, original factors, and low-order capital goods will then decline for two reasons: lower C and higher Q; for high-order capital goods higher Q will exert downward pressure on their prices, and higher I, upward pressure. But in any case even with the price deflation total buying MV will equal total selling PQ, and the entrepreneurs will at least break even. Finally, excessive disequilibration may indeed produce some losses. But the number of entrepreneurs squabbling with each other under normal circumstances is nowhere near that number that is generated by an unsustainable boom.

(3) Whether losses cause pessimism or pessimism causes losses is unspecified as well. On the other hand, ABCT postulates an interplay of objective and subjective factors together perhaps with what I in (I, 43) called the catalyst in causing both a contraction and recovery from it.

(4) We do not of course start in the state of equilibrium; the law of averages would seem to imply that in the real economy new entrepreneurs constantly appear and seek to test their mettle in the market; the sudden waxing of the animal spirits and an investment binge must be explained as part of explaining the business cycle itself, not assumed from the beginning.

(5) There is no reason why so many entrepreneurs must fail if there are sufficient savings to supply all of them with present goods which will constitute their capital. It is true that the established businesses, those that are evenly rotating, may experience losses if the newcomers do a better job than they, but that is just creative destruction in action. Why must it proceed in *cycles*? A theorist cannot be content

with saying that what goes up must come down and vice versa. The problem is, first, to understand why the process of economic improvement for which capitalism is so justly famous should be stopped in its tracks and reversed; and second, why the disruptions are so monumental in scope.

(6) Finally, of *which* capital does the marginal utility decline? Presumably, society is more productive because of the influx of the capital goods. That means that the consumers' less urgent wants can now contend for satisfaction. The diminishing marginal yields of capital and other factors of production *in terms of the consumer happiness obtained by employing these factors* are surely notable, though again there is a certain parity between a poor society whose members by acting satisfy *a few* "very important" desires, and a rich society where *lots of* "less important" goals are achieved on the margin. But people choose only between those goods that are presented to them by the entrepreneurs. If all firms become more productive by an equal amount, then this will provide a boon to the consumers and raise real wages, but it need not necessarily endanger the relative position of any one entrepreneur with respect to any other. The MEC need not decline for *that* reason, indeed the *means* of monetary profits to various market agents are a different thing altogether from the *end* of real psychic profits.

Hall's entry on the Keynesian business cycle is not a theory at all as it proposes no plausible cause and effect relations. The "Keynesians" are all wet.

15. That the rational expectations theory is based on irrational expectations and falsely so

Thomas Hall (1990) presents the idea of rational expectations in terms of the differences in the quality of knowledge of economic agents of certain kinds of events on the market. A company knows "a lot" about its own product, and workers know "a lot" about the demand for their skills and about the supply of other workers with similar skills. "In other words, the worker-producer has very accurate, up-to-date information about the price of his or her own product but is not as certain about the aggregate price level." Even if a Misesian housewife (see (I, 2)) may know quite a bit about the market prices of commonly bought articles, nevertheless "there are many goods and services that are purchased only occasionally, such as houses, autos, and appliances by households, and structures and equipment by firms." People do not, the rational expectations theorists argue, keep up with the data on such durable

items.

Our author continues with a bizarre sentence. “Suppose that these individuals and firms suddenly observe an increase in the price of the product they produce.” (97) *Observe* an increase in the price? I thought they *set* the price! This can be interpreted in three ways. First, that the individuals and firms observe a shortage or surplus of their product and alter prices in order to bring the supply and demand into equilibrium. Second, that firms observe their competitors producing the same or similar things raise or – more plausibly – lower their prices. Third, that firms see their costs of production change and wonder if they need to and can adjust the supply of their products, as well.

In any case, Hall argues that this change (suppose it is an increase) could be due either to an increase in “aggregate demand” or to an increase in the particular demand for the individuals’ or firms’ product. In the first case, we seem to be moving instantly from one ERE to another, and all nominal wages and prices will rise or fall in unison without any consequences for the output. In the second case, both price and quantity supplied can increase, as well as, after a while, the real wages of the workers involved in making the product. (Notice an inconsistency, namely, that in Keynesianism inflationary increases in aggregate demand fail to affect output only in the long run. The rational expectations theory of business cycles is false from the Keynesian point of view.)

Here is the key point: if the change in the aggregate demand is anticipated, then companies will not try to increase output, correctly perceiving the change to be “global,” affecting the price level but not production. If they are *not* anticipated, then they will mistakenly deem it to be “local,” representing a change in the demand for the firms’ particular product, and the firms *will* try to raise output. The business cycle can now be understood as a cluster of errors arising from foolish misapprehensions of global changes as local. Output and therefore economic activity are increased, generating a boom. After a period of time, errors are revealed and corrected, and malinvestments, liquidated. The cycle thus depends for its existence on human *ir*rationality.

Now ABCT, as defended in this book, postulates a deception perpetrated on entrepreneurs (actual and potential before the onset of credit expansion) by the monetary authority. It argues that credit expansion distorts economic calculation, and that the expectations of abnormally high profits by all cannot be sustained. Moreover, it points out that businessmen cannot avoid competing in this poisonous environment. If they do expand along with everyone else, then they run a high risk of losing money and going bankrupt. If they *fail* to expand, then they have lost already. As Cassidy (2009) points out, “in the frenzied atmosphere of a bubble, companies that stick to the old ways of

doing things lose market share, their stock prices suffer, and their top managers get criticized" (246). Similarly, Hunter Lewis (2011) urges us to resist blaming CEOs for going into high debt because "those who resisted the debt craze were pilloried, called incompetent, and threatened with the loss of their companies to corporate raiders…" (238).

Here, however, there is no fundamental reason why a company must fall prey to an illusion. The decision whether a change in the demand is only nominal or real (and often in addition nominal) is made by each company every day. If becoming a Fed watcher, keeping an eye on those rarely bought goods, and learning to spot bubbles are good for business, then nothing prevents companies from hiring the right experts. Surely, corporate economists (or rather bean counters) are a dime a dozen, and with modern information technology one can upgrade, if ever so slightly, our housewife's capabilities. Moreover, since rationality garners profits and irrationality brings losses, irrationality is self-penalizing and would tend to go extinct in the economy.

Hall gives an example of the Fed behaving predictably and economic agents taking its actions into account and interpreting them as "global" events which means that "output would not deviate from the natural rate." That, in turn, means that "systematic monetary policy" is futile because it will be foreseen and countered. Our author makes an error precisely opposite to the ones which he thinks are made during the boom part of the business cycle. For inflation does not raise all prices equally at the same time. As I argue in (I, 17), money is not neutral at all in the short run and neutral only with respect to the economy's general laws of operation and not in its actual production structure in the long run. Given the interminable interventionism, the long run is never even reached anyway. Thus, the Fed may generate inflation which will result in a local increase in the demand for a particular company's product. Now is the time for the company to take advantage of the opportunity that may not last long. *If it interprets the change in the demand as global, then it will miss its chance to profit.* The profit will be short-lived, but then all profits are. People learn by watching other market agents succeed or fail; they then avoid those actions that seem to fail and engage in those that seem to succeed. In general, the market abhors profits and will imitate them away, whatever their source.

There are few if any changes in the economy that do not privilege one company against some other. A general rise in the price level may be a long-term consequence of an old inflationary policy. But even it will come about as a result of numerous local and uneven price changes, predicting which is the point of entrepreneurial art. To strengthen my critique, *any company or worker will be well advised to be biased toward considering any change as local*. Even if a company has not been "blessed"

by the inflation and receives the new money last such that the price increases of its products are the last step in the process of the rise of the entire overall price level, it may have been forced to contract production under pressure from those firms that received the new money first, and having weathered the storm, it now finally has an opportunity to expand again. So there is no reason for irrational expectations to be formed, and moreover most of such expectations will not even be irrational in the first place.

It follows that the rational expectations theory must be understood differently. I have argued that it is most sensible for individual firms to treat spikes in demand as local *even if* they are fully aware that they are ultimately global. This is because *all* such spikes are local, even if months or years later all prices will eventually catch up. But perhaps what Hall means is that each firm's expansion helps itself but harms everyone else. All entrepreneurs consider global changes as local, expand, and then are forced to contract due to each other's interference. Against this we will make two observations.

First, prices rise one after another in sequence as new money finds its way into the hands of an increasingly greater number of people. Therefore, expansions are not attempted at the same time which means that increases in demand for *X* and *Y* trigger increases in costs of *Z* and *W*. Each expansion by one business necessitates a contraction somewhere else, thus avoiding the dog-eat-dog competition for factors. So there may be oscillations, indeed they may be wasteful and costly from the social point of view, but it seems unlikely that they will amount to mass bankruptcies and unemployment.

The Austrian theory points out that numerous longer projects are started as money is injected via credit markets while factor prices are still low. In the beginning the established late-stage companies lose some workers and capital, reflecting the natural scarcity of resources exactly as in the rational expectations theory. However, at the very time when goods are being carried down the production structure, inflation is also spreading in the economy. Consumption and derived demand for factors in the late stages of production pick up. The escalating bidding war causes costs of doing business for early-stage companies to rise relentlessly, though unpredictably and differently for every entrepreneur. At some point, the factors needed to complete the longer projects come to be priced so high that profits cannot be obtained. In the simplest of terms, first, early stages expand and late stages contract; as time goes on, late stages expand and early stages contract. But the two contractions could not differ more. The former contraction is in between production rounds. A late-stage businessman simply realizes that he cannot evenly rotate and prunes his operations. No losses are suffered. The latter contraction is inside a round *while goods are still*

being manufactured. To avoid losses, each entrepreneur needs to borrow more money. As all try to do so, the demand for credit rises pulling the interest rate back up. The capital restructuring that accompanied the boom has been shown futile and must be undone. In the process, capital evaporates, and society is impoverished. In the model being considered here, however, there is no misallocation of resources.

Second, the rational expectations story might sound plausible if inflation was initiated by the government's printing *fiat* money and mailing "stimulus" checks to every citizen. If an imp secretly doubled the size of everyone's cash balance overnight, then this act would indeed result in a consumer feeding frenzy and attempts to expand production that are doomed to failure. Immediately after the impish stimulus, any given expansion due to higher local demand may seem doable, but as expansions are attempted by more and more companies, the prices of both original and produced factors rise ever faster. This upsets profit expectations and leads the economy to a bust. Even here prices are likely to rise so fast as to preclude any serious misallocation of resources. What is likely to happen in practice is that excess capacity within firms will be filled and employees will be asked to work overtime temporarily while the price level adjusts, and then production will slacken once again.

However, inflation is not introduced into the economy in this way but rather through increases in *credit* money by the central bank and commercial banks. Inflation that raises commodity prices is less pernicious than inflation that, by affecting the loan market, *in addition* distorts the interest rates. Let me suggest therefore that there is *a* rational expectations theory of business cycles, but it is inapplicable to the actual cycles that we have experience with.

16. That monetarism is bastardized ABCT

Thomas Hall (1990) makes monetarism look uncomplicated. An increase in the money supply standardly done causes interest rates to fall and some local spending to get a shot in the arm. Not realizing that the increase in "aggregate demand" is due to purely monetary factors, those companies that receive the new money first expand production, and the factors employed by those companies after a while enjoy higher incomes. Hall writes that "there is a peculiar asymmetry in this model. Firms know what the inflation rate is and base their hiring decisions on the actual real wage, while workers base their labor supply decisions on the expected real wage which is based in part on adaptive expectations of the inflation rate." (70) Of course there is an asymmetry: the demand for consumer goods is original and direct; the demand for factors of

production is derived and indirect. The whole point of entrepreneurship is to take advantage of any temporary spread between the prices of the factors, corresponding to their lower derived demand, and the expected price of the consumer goods, corresponding to their higher original demand. It thus depends on the ignorance of the factor owners of profit opportunities noticed and acted upon by the entrepreneurs. These opportunities include inflation-generated profits. Factor prices adjust only with a lag.

Initially the nominal interest rate might decline from, say, 5% to 3%. Eventually, however, the injections of new money into specific points of the economy percolate into the rest of the system and raise the overall price level. The interest rate goes back up concomitantly to its natural height, 5%. But at this point continuous price and wage inflation can be observed. Not only that, but people take into consideration the *acceleration* and even higher derivatives like jerk (measured in m/s^3), etc. of inflation, if any. This causes output to shrink to its previous dimensions. If the Fed wants the boom to continue, then it must create more money at an ever-increasing rate, otherwise the nominal interest rates will go up because people now expect the inflation to continue the way it has so far (according to their "adaptive" expectations), to, say, 7%. Sooner or later, however, the public will demand that inflation be curbed. The Fed obliges, and the results are higher interest rates and lower money supply, i.e., deflation, such that those who *lose* the *old* money *last* benefit. This creates an additional disincentive to consumer spending. The economy is steered toward a recession such that the contraction is argued to be due to the conjunction of the increase in the general price level and the Fed's attempt to combat this increase (which it itself of course brought about) by raising interest rates.

Notice that there is no trace in the monetarist account of the Austrian understanding of the Fed's subversive role. Monetarists do not ascribe any significance to the distortion of interest rates from their true values (TIR). For them lower interest rates are simply another stimulus to aggregate demand. They build their business cycle theory on the equation of exchange, $MV = PQ$. If M rises, then in the short run P and Q rise, and in the long run Q falls back to the previous "natural" level, while P rises still more. Further, the Fed's tightening of the money supply merely aggravates the contraction that begins with general price inflation. But the interest rate will remain high only for a spell; in due course the system is normalized, and this rate again returns to the level set by the market. The Fed must destroy money at an accelerating rate in order to keep the interest rates high. But then unemployment makes its appearance, and the Fed is forced to loosen its monetary policy. And round the merry goes. The cause of business cycles then is "erratic nominal aggregate demand growth caused by unstable monetary

growth" (83). The money supply growth is unstable because the Fed's target has often been low interest rates (stimulated no doubt by the inflationist ideology) rather than money supply simpliciter, and manipulating those can call for a mercurial monetary policy.

The idea is that given its interest rate target, the central bank engages in what may be called "market confusion" in which its only chance of being "effective" is to be unpredictable. The point is to prevent people from surmising a trend in the Fed's actions and countering it by raising or lowering the nominal interest rate in response to price inflation or deflation. For example, if the Fed pumps in money in a predictable fashion for an extended period of time, then real interest rates will head down, but the nominal rates will compensate for that as the supply of money loans falls and demand rises. *Any* kind of definite strategy of confusing the market will eventually be cracked by the people, so the only strategy that will work is a completely random one such as the Fed chairman throwing dice or using random number generator functions in computer code. But that of course will destroy the economy.

The business cycle theory flowing from the foregoing is unlike the Austrian theory expounded on in this book. The latter focuses on the travails of interest rates and derived demand and their effects on the intertemporal structure of production. The monetarists admit that manipulation of interest rates has the power to stimulate or cool off the economy. But their theory of how this process works invokes solely the inflation caused by the central bank. Credit expansion in monetarism is merely a particular way in which inflation and its consequences are unleashed. For all the monetarists care, people could instead be bombarded with newly created paper dollars from outer space in a random and unpredictable fashion in order, as per their system, to confuse the market. The boom arises because inflation creates profit opportunities for business firms. It is true that the monetarist "confusion" damages the function of money as a unit of account. The market is supposed to be rational, as in permitting correct economic calculation, and the central bank dims this rationality. But not enough to cause a business cycle, and this for three reasons.

First, monetarism makes it seem that the new output stimulated by the higher short-term aggregate demand appears immediately, while in reality it takes time to increase production. Now (money supply) inflation does not manifest its symptoms (i.e., price inflation) fully for a while, so (a) higher nominal demand is not reflected in higher (overall) price level. At first companies whose products have enjoyed higher demand must raise prices (of their specific goods) to ration existing inventories. So long as there is unused capacity within the fortunate firms and their suppliers, it can be utilized, resulting indeed in (b) an

increase in output, exactly as monetarism proposes. A bit later the same firms may attempt to (b') expand capacity and increase supply still more, this time lowering prices. However, as soon as unused capacity is exhausted, the higher demand will result only in (c) shortages of capital goods, including labor in possession of the requisite human capital. Expansion of output requires more borrowing which increases demand for credit, raising the interest rate, and which is in part filled by dishoarding which boosts prices still further.

Soon enough factor prices catch up, and profits due to inflation disappear in exactly the same way in which all profits disappear due to equilibrating entrepreneurship, except that nominal incomes will rise. Therefore, the expansion due to (i) local increases in nominal demand does not take the economy beyond its production possibility frontier. Whoever gets the newly created money first benefits at the expense of those who get it last. The steps that one group of entrepreneurs take to expand their production, such as slurping up the factors of production working in other firms, signal to other entrepreneurs, as per (c), to shrink production insofar as the latter receive their revenues in money of diminished purchasing power, signifying higher costs of doing business. The economic processes going on are morphed and restructured, but there is no systematic deception being executed. In other words, a local spike in demand for *X* normally comes at the expense of *demand* for some *Y*. *X*'s quantity supplied increases; *Y*'s, decreases. Under inflation, a boost in the demand for *X* comes at the expense of higher *costs* of producing *Y*. This time, *Y*'s supply curve shifts leftward, and quantity supplied again decreases. In either case, there is no boost in output or employment whatsoever.

It is true that the Austrian theory too is subject to a similar query: will not the factors of production being demanded by both longer and shorter processes be in short supply? The Austrian theory depends on the prices of these factors rising with some speed and annihilating the *expectations* of profits by virtue of the rise in the demand for credit and the likely restraint in credit money creation. It does not, like the monetarist theory, need a period of expansion during which *actual* profits are made and inflation is unseen by most. For the Austrians, entrepreneurs find themselves in the money through *investments* which are later proven vain and profitless; for the monetarists, money goes to them through *consumption* which does generate profits. The technology stocks boom in the 1990s is sufficient evidence to refute monetarism. There were no profits at all being enjoyed by most dot-coms at any time during their brief existence. For if there *are* profits, then the expansions have been *successful*, unlike the efforts of the hapless entrepreneurs in the Austrian scenario.

Moreover, the contraction due to (ii) a global price level increase

does not take the economy *below* the production possibility frontier but again keeps it on the frontier. The reason is that as the expansion peters out and then is reversed within the initially lucky firms, it picks up with the initially unlucky firms which at long last enjoy higher demand. Hence we should not see boom and bust, happiness and misery, or mania and crash, and therefore there is no *cycle* to speak of.

Recall that in the Austrian theory, credit expansion stimulates the lengthening of the production structure, while inflation stimulates consumption and the demand for factors in the later production stages. This sets the stage for a clash between a much higher than usual number of entrepreneurs and projects in which those entrepreneurs are engaged. No time has been supplied for new capital goods to be created, and there are not enough existing goods and factors to make every entrepreneur's project profitable. Mass losses ensue. Monetarists argue that higher demand and therefore consumption stimulate production. The business cycle arises because this new production gives way to a contraction when inflation is curbed. What they do not seem to understand is that their kind of stimulation is *sequential*. Demand for *X* increases; then quantity supplied of *X* increases; this raises costs of production for other businesses; which then contract production. There is no wild competition for resources *at the same time*. A similar process occurs in the alleged contraction. Certain companies experience a diminution of demand for their products. They restrict production and fire their workers. These workers are picked up cheaply by other firms which in addition receive revenues in the form of the money of higher purchasing power. These luckier firms on the contrary step up production. Whence then is the *malignant* business cycle?

Second, the price level in a large economy rises slowly regardless of the details of the monetary policy which means that firms have ample time to detect and adapt to it. They need not be taken by surprise by the spread of the new money and should be able, contrary to monetarist predictions, to adjust production to the new realities well before they are harmed. It's not as if PL equilibration is a shock like a terrorist bombing of a factory that disrupts operations.

Third, firms *should* take advantage of injections of new money if they are the ones who are going to receive it first (via a higher demand for their products, according to the monetarists) before the price level has risen. Once again, profits do not live long, and this kind of opportunity is no more disreputable than any other. The first recipients of the new money are not responsible either for inflation or for inflationism. They should maximize their profits and care not a whit for politics or ideology. At the same time there is no malinvestment going on. There is indeed an arbitrary redistribution of wealth, but that is an inescapable feature of all inflation. In the Austrian theory an individual

firm's decision to use credit expansion for its own benefit is sensible, but when everybody does it, there is trouble. People's individual rationalities conflict with the group rationality of the whole society: what's good for each is bad for all. But the expansion and contraction postulated by the monetarist theory both (1) are rational and correct as responses to an inflationary policy for the market agents and (2) are such that the first recipients of the newly printed cash do not interfere with one another when they expand production.

Mining gold when gold is money is exactly the sort of process monetarists envision, producing inflation without credit expansion. Yet there is no business cycle generated by the working of the mining industry.

Spurred by this naive inflationist theory of the business cycle, the monetarists recommend bidding the Fed to "maintain a fixed rate of monetary growth. Proposals include requiring the Board of Governors to tender their resignations to Congress each year they do not meet a specified monetary growth target, or replacing the Federal Reserve with a computer that simply buys enough bonds on the open market to maintain a certain percentage growth rate for the monetary base." (85) The difference between the monetarist and rational expectations theories of the business cycle that works in favor of the former is that the monetarists recognize the unpredictable nature of the initial inflationary stimulus' fanning out throughout the economy. However, they err in thinking that it is the *inconstancy* of inflation that is at the root of the whole monkey business and not (1) the extent of the inflation and (2) the means by which inflation is carried out, namely, credit expansion.

For example, Milton Friedman's famous prescription was to have the Fed increase the money supply by 2-3% per year. The amount may or may not be justified by the (wrong-headed) desire for price level stability. But there is nothing in the monetarist *theory of business cycles* that compels low inflation. The inflation needs only to be predictable but can presumably be 20-30% or 200-300%. And the fact that inflation is actuated by the concerted action of the central bank and commercial banks will ensure that the business cycle will not be appeased by such a paltry sacrifice of the bank's authority. Even if there is no creation of fiat money by the central bank, the creation of credit money alone by commercial banks is sufficient to produce business cycles. For the latter still depresses the interest rate below its market level with all that that implies.

In short, the monetarist *policy* fails on its own terms even if we consider the *theory* on which it is based to be correct, but of course it is not correct. Inflation is a necessary not sufficient condition for a business cycle. The monetarist business cycle theory must hence be

judged wanting.

17. That the "real business cycle theory" is not even wrong

Business cycle theorists proceed as if by discovering the obvious. What the Austrian school from its inception has considered to be fundamental facts, directly derivable from the axioms of human action, other schools periodically figure out as profound breakthroughs and build theoretical edifices on them (often to abandon them later). Case in point: according to Thomas Hall (1990), "modern demand-side models also postulate that real wages are countercyclical over the business cycle…, because of incorrect price expectations by labor suppliers (monetarist and rational expectations) or rigid nominal wages (new-Keynesian)." Of course they postulate that because in the real economy, unlike in an ERE, factor incomes lag behind profits and therefore behind prices. If they did not, then there could be no such things as profits at all. Profits are earned in the boom part of the cycle, according to the theories mentioned, and disappear in the bust part of the cycle. Therefore, wages are comparatively low during a boom and catch up during the bust. Hence, wages have to be countercyclical.

Now plainly this result flies in the face of evidence. We all know that some wages go sky high in the upward reaches of the business cycle and must dramatically come down during a depression. Therefore, "wages" in aggregate are neither pro- nor countercyclical, rather during a boom some workers enjoy high derived demand for their services while others languish at the bottom. In other words, there is a *redistribution* of wage incomes from the old "dinosaurs," shall we say, toward those workers who are employed in the industries and firms awash in new money. Moreover, according to ABCT, profits are never received by the majority of the firms started during a boom in the first place. There is lots of *investment*, to be sure, but most of it is worthless or "toxic" in the current parlance. So, it is certain fortunate factor owners who gain the most during a boom because they receive high *present* wages; entrepreneurs who pay these workers their wages lose because their projected *future* profits never materialize; and the less agile and quick-thinking workers end up holding the short end of the stick when price inflation hits the goods they buy. The Austrian theory explains all that, no other theory herein presented does so. Hall ignores Austrianism entirely, hence he is puzzled over the "inability to explain actual real wage behavior" by "modern theories" (121).

The real business cycle (RBC) theory makes another "discovery." The real economy, it breathlessly tells us, is subject to "supply shocks." "These shocks can be caused by a wide array of factors including

demographic changes, technology shocks, changes in relative input prices such as the oil price shocks of the 1970s, and changes in consumer preferences." (122) Other examples include "major shocks like a plague or a war, but more likely they are a series of smaller shocks to labor, capital, and technology that have a positive trend value plus a random component" (123), even new government regulations and bad weather. The business cycle occurs when several shocks in a row all tend in the same direction, resulting either in an increase in output or in its decrease.

Well, shiver me timbers. Again we are informed that the real economy does not evenly rotate. The external environment in which human beings live changes, and people act purposively in hopes of improving their lot in life. These acts of God and acts of men constitute the "shocks." But since we are being macroeconomists, we are not concerned with such trifles. We soar high above and enjoy a bird's-eye view. Therefore, RBC theorists conclude, if we are lucky, then we will randomly experience a streak of positive shocks which will increase productivity and wealth. If the fates are against us, however, then we might suffer a streak of blackjack losses… I mean, a series of negative shocks, throwing us back into wretched poverty. And since it is inevitable that sooner or later a situation of a sequence of positive shocks that is followed by a sequence of negative shocks will arise, we observe cycles.

Another crucial "finding" is that shocks tend to persist. Well, if the "real" theory purports to explain business cycles, then it must surely presuppose that business cycles occur. And if they occur, then they persist for some time. Why do *shocks* persist then? Hall explains it as a consequence of two "assumptions": first, that production of new capital or consumer goods takes time and second, that following a personal "shock" of a change in income or wealth, people adjust their consumption patterns slowly. The first assumption is nothing of the sort but is yet another corollary of the human action axiom. We could say that the formulation of a plan of action can take a short amount of time, but putting that plan into action can take years. Therefore, the initial "shock" of an entrepreneur committing himself to the realization of his plan may take a while to manifest its full consequences. But that these 100% generic events, namely, people forming ideas how to profit, have the power in and of themselves to cause business cycles is incredible. Moreover, the production of a good is not a blob of a shock; it involves variable multiple transformations of raw materials by means of machines and human capital. The second assumption is also a perfectly general observation: if anything changes within the market process, it is people's "income" and "wealth." Is every single such change an RBC "shock"? It does not matter whether people react to these shocks slowly

or quickly; a phenomenon that contends to explain everything (i.e., is, like, say, "2 + 2 = 4," consistent with any set of data) actually explains nothing.

Hall's example of a positive shock is that "high-speed assembly line robots are introduced. Initially, firms that gain from this new technology… will demand new capital goods from the firms that produce them." (124) But that's not the boom part of the business cycle at all but economic growth. Moreover, "creative destruction" naturally has both creative and destructive parts. The rise in the demand for innovations is accompanied by a fall in the demand for the old inferior tech. Nothing abnormal is going on. A business cycle is a perverse and disastrous development to be avoided because the boom is both un-utilitarian, allocating scarce resources improperly, and liable to crumble from the inner tensions within itself; exploitation of an invention both serves the consumers and is sustainable in the long run.

A final feature of the RBC theory is its view of money. It claims that higher demand for money Q / V (a standard feature of a growing economy with increasing Q) brought about by the positive shocks may give the Fed a reason to increase the money supply "to meet the higher demand." This explains the "positive relationship between money and output" (125) observed within business cycles. It's not inflation, etc. that cause the boom but the reverse: the boom caused by the shocks induces inflation. The Fed and the banks are completely innocent; they merely accommodate the preexisting booms thereby creating an illusion that they are responsible for them. The cycle is caused by random blessings and curses of the economic gods.

A word may be said about the idea that the supply of money "should" grow along the demand. We have seen that no economy, whether growing or shrinking, has any need for a money supply different from that money supply that it already has, though serious PL disequilibrium can be problematic. Only in hyperinflation might the monetary authority have a "reason" to inflate at an increasingly higher rate in order to "meet the demand," but only because prices rise faster and faster precisely because people expect more inflation.

During a hyperinflation indeed the moment the government prints "enough," inflationary expectations cause the demand for money to fall and prices to rise so much that the amounts of money in people's hands are too low to buy anything on the market, and the central bank is forced to print still more paper. Here is how it works. Believing their savings to be losing value, people seek to spend their money, reducing the money's purchasing power and raising prices. On the other hand, durable goods are withheld from the market as merchants hold out, thinking that it is not worth selling the goods at "low" prices. Insofar as goods are not being sold, they are not being produced, either. Demand

for money D, being proportional to Q / V, goes down with continuous decreases in Q and increases in V. Price level P, proportional to M / D, rises also as M rises. The market falls apart as social cooperation is sabotaged. Goods end up costing much more than what people have on hand, there is a shortage of cash. Since money has no substitutes and is the only thing that vendors will accept in exchange for their products, people petition that they be given more money. If the central bank complies, then the present inflation helps to kick-start exchanges for a short while but also confirms the previous expectations of inflation and strengthens new similar expectations to a still greater extent, lowering the demand for money yet again. The prices are affected by *three* factors which reinforce each other: increasing money supply, increasing velocity of circulation of money, and spiraling down production; while the money supply is affected by only *one* factor: the willingness of the central bank to print money. Therefore, in hyperinflation the rise in the price level will generally exceed the capacity of the central bank to keep up with it, with the result that the money supply and prices will chase each other into a crack-up boom.

In a hyperinflation, money loses its utility as a store of value completely and its utility as a unit of account partially. These events undermine money's primary function as a medium of exchange. Otherwise, the money supply ought to be fairly stable as gold (and to a lesser extent silver) has proved to be. Hall also points out that for the realists money is neutral even in the short run, certainly an outrageous notion and sufficient in and of itself for the theory to be rejected.

This "luck hypothesis," namely, that a business cycle will occur when a totally random composite event of lots of good shocks that are followed by lots of bad shocks occurs, may be a sign that economists are finally giving up on finding any genuine explanation for this phenomenon. (Surely, we are not dealing with the "infinite monkey" theorem or anything like that. It would take a lot of monkeys banging on the threads of fate in order to generate business cycles *that* way.) Perhaps in time the despair will give way to joy as the Austrian account of this matter is rediscovered by the mainstream.

18. That the state is not an uncertainty-reducing institution

The Post Keynesian Steven Pressman argues that when people's demand for money increases at the expense of the demand for goods, "because no one is hired to produce money, workers get laid off, businesses cannot sell goods, and everyone is more fearful about the future." In other words, increased demand for money does not result in increased quantity supplied of money. Money thus "helps create

unemployment" (King 2003: 198). Pressman does not realize that the fact that workers and capital do not get reallocated from producing goods to producing money is a godsend. The fact that any money supply is as good as any other money supply at fulfilling the money's function as a medium of exchange is wonderful. It is a blessed property of money that it does not need to be produced. The workers who become temporarily unemployed during an economic slowdown have an incentive to find other more productive occupations. Their labor is not wasted producing money. In fact, this is an argument – the only good one – in favor of fiat money: if the central bank is fully committed to zero inflation, then society can save the cost of digging gold out of the ground. The problem is that when we calculate all the *real-world* benefits and costs of commodity money vs. fiat money, e.g., taking politics into account, then the former wins straight out. (In addition, as we've seen, gold mining can help efficiently alleviate PL disequilibria.) The only way to eliminate cyclical unemployment is to eliminate the busts which can only be done by eliminating the entire business cycle. However, it is very difficult to compel the central bank to maintain a stable money supply and the government to enforce honest banking practices.

Higher demand for money does not mean that people *collectively* do not want to consume, it means only that they want to consume at lower prices. As this demand is proportional to Q / V, V is governed by "subjective and arbitrary" forces of individual preferences. The dominating factor is increasing Q as the economy progresses. This process is entirely virtuous.

Pressman considers the state to be a provider of "certainty." For example, he writes that "people may not spend if fearful of the personal consequences of becoming unemployed. A viable social safety net alleviates this concern." (199) He fails to grasp that the fear of becoming unemployed is a holy fear, it is fear of becoming useless to society. It keeps all humans alert and eager to participate in social cooperation. It strengthens the will to live and to stay healthy. It increases worker and entrepreneur efficiency with obvious gains to society. Libertarians are perpetually slandered by claims that they deny the utility of a social safety net. That a safety net is useful is not in question. The question again is not one of ends but of means. How do we design the most effective safety net? This institution must not interfere or conflict with society's productive forces. It must not put a damper on social cooperation and impoverish the general population. It must not commit injustices. It is often assumed quite without argument that this net must be maintained (1) by the government, (2) in the U.S. by the federal government, (3) coercively by means of taxation, and people assume (4) that it must be handed out impersonally by bureaucrats. All of these

assumptions are questionable.

For example, in reality a safety net can only be usefully maintained within *personal* institutions like the family or church, in which the helping actions are joined with charity in the heart, and charity in the heart is joined with keen discernment in the intellect. Impersonal bureaucracies responsible for handing out dole have no way of distinguishing when help is truly needed from when it is superfluous or even destructive. On the side of the recipients, personal safety nets offer reproach for being supported by the gifts of others, a dose of shame if you will, thereby instilling a desire in the poor person to become self-sufficient. Many government welfare recipients think that their benefits are richly deserved and that the taxpayers are suckers for authorizing them.

The one-size-fits-all social security system, even assuming that it operates not as pay-as-you-go but as a forced savings scheme with a personal account for every citizen, presupposes falsely that people are unable to save for themselves, that they are imprudent, while the state is there to save the masses from themselves. This, I want to suggest, is the exact opposite of truth: the state is profligate beyond belief, having in the U.S., for example, amassed an enormous debt. It also prevents people from customizing their retirement plans for themselves and from receiving greater returns on prudent investments.

Financing the safety net by taxes constitutes naked unvarnished theft in which some members of society are forced to relinquish their money for causes they themselves do not care for. Capitalism is a system of consumer sovereignty. Items of consumption include charitable donations. It is each person individually not the state or political majorities who decides under capitalism whom to bless with works of mercy. The local government is praxeologically necessary, and taxation for the sake of supporting it may be justified if no better way gets invented. But not charity. Again, either we have laissez faire in its entirety, or we lose the ability to argue against out-and-out socialism.

The reason why Social Security in the United States is the third rail of politics is also related to money and banking. For business cycles undermine people's attempts to save for retirement "quickly" and spectacularly; inflation undermines the same "slowly" but surely. As a result, crypto-socialists of all parties obtain recourse to the argument that the community should be charged with providing for everyone's old age. Make banking honest and money private, and Social Security will fast come to be seen for what it is: intergenerational larceny. There is no principle of justice that takes the fact that young Smith was robbed by old Jones to permit Smith, when he himself gets old, to rob young Robinson. Is it at all conceivable to people these days that a society is possible in which there are no looted who become looters simply by

turning 65, that one can be neither a victim nor a perpetrator but a free person?

It is true that "deposit insurance, in conjunction with central banks operating as a lender of last resort, reduces the likelihood of bank runs and financial collapse" (199). But these policies treat symptoms only and not the root cause of the disease. They are interventionist measures piled on top of previous interventions that were revealed as contradictory and destructive. The results are a system subject to irrational business cycles, an ever-present possibility of hyperinflation, and a government empowered by the printing press to run a worldwide empire. Certainty? I will take less of that, please.

Market stabilization is an oxymoron. The market is a process in perpetual flux. The system of prices, the structure of production, and the resources involved in productive activities are each day rearranged and reconfigured by novel human action. The market's continuous tendency toward equilibrium is again and again interrupted by entrepreneurial creative advance. Conversely, what *is* stable are laws undergirding the market which secure rights to property, exchange, and contract. Grotesquely, it is these laws that the government is constantly changing, thereby exposing the market to extra political uncertainty. The government stabilizes what ought not to be stabilized (the market) and upsets what ought not to be frequently upset (the legal system unless it is a once in a blue moon improvement to it). It is plain that the "stability" or "certainty" the government brings is not the stability of the natural law and praxeological law and "permanent things" like human virtues and efficient common law but of the law of the jungle: what is stable (or more or less so) are the amount of money the state extorts from the populace and a certain modus vivendi or fragile limitations on the arbitrary power of the state to harm the citizens that the latter have wrested from the state after perhaps centuries of difficult struggle. The government indeed hates competition because maintaining a monopoly of force over a territory is the government's way of limiting exploitation of the public by rival gangs of thieves (exploitation which is subject to tragedy of the commons) and taking everything it can lay its hands on without ruining the economy for itself. Some "certainty" that is.

Pressman lauds the state for "giving economic actors confidence that the future will be like that past." Is he familiar with the word "progress"? The word "entrepreneurship"? The word "innovation"? The future ought not to be like the past; given that people struggle to increase their well-being, their future must be better than the past! That is what the axiom of human action *means*.

The fiscal and monetary policies, Pressman avers, "give business firms the confidence to invest, knowing the chances are good that production from any new plants will be sold at a profit. They also give

consumers confidence in the future and keep them from hoarding money in fear of bad economic times." (200) It does not occur to him that if all "business firms" are guaranteed a profit, then we are no longer dealing with a capitalist system. A system in which profit is private while losses are socialized is self-contradictory and impossible not merely praxeologically as socialism is but logically (by destroying entrepreneurship). Even if Pressman means that only during a depression must the government rescue failing companies, this does not alter the nature of my argument. On the contrary, the mass losses during the bust must be allowed to occur; subsidizing bankrupt firms at taxpayer expense is even worse at that time than at the time of the illusory prosperity of the boom.

The "bad economic times" are due entirely to the policies of the government, and I have demonstrated that hoarding is not socially vicious. The amount of money in people's bank accounts that is earmarked for hoards is fairly stable. A young person entering the workforce may decide to accumulate a certain amount of cash to be kept just in case. Having hoarded enough, he begins to spend or invest his entire paycheck. An old person may on the contrary dishoard and spend because his "rainy day" has already come. (I do not mean that the old guy must decide to die broke or spend millions to prolong his life by another week, but, for example, he may give some money to his grandchildren before he dies in order to finance their dreams.) On average, V will not oscillate too much. In the longer term, human confidence in the stability of their surroundings increases naturally with economic growth. People in primitive societies are forever at the mercy of their environment. Anything, from drought to illness, can happen that would doom them personally or their entire tribe or community to privation or death. But an advanced society has numerous layers of redundancy. A disaster in one part of the social body will cause a variety of fail-safe mechanisms to kick in that would protect the larger society and offer aid to the victims. Confidence rates then rise with increases in wealth, greater market connectedness, the strengthening of human power over nature, and efficiency of mutual aid organizations. As hoards slowly diminish, consumption and investment are gently stimulated. This provides still more help toward relieving any possible excess demand for money. On the other hand, lower confidence in a bust is entirely an outcome of a poorly constructed system of social cooperation. There are imbalances in the yin and yang economic forces. They may not be life-threatening, but they certainly check economic growth and induce social unrest. Hoarding is the economy's healthy reaction to those imbalances and its way of promoting self-healing. And if the economy is being undermined, as it is during a boom, then confidence in the future is an illusion which, we can be rest assured, will

be speedily dispelled as poverty and social and economic decline roll in. One cannot just paper over real discoordination and impoverishment and economic chaos with fiat $100 bills.

Pressman's artlessness is staggering. The reason why we need certainty is that both businesses and consumers "would spend more." That's it! Spend more. That is the essence of Keynesianism: prosperity is attained by "spending more." Such was the "revolution" that almost killed economics.

19. That there is no such thing as "war prosperity"

If there is any flaw in Mises' writings, it is his somewhat cavalier attitude toward war. On the one hand, he insists in numerous places that war and market economy are ultimately incompatible with each other. "Capitalism is essentially a scheme for peaceful nations," he points out. (1996: 828) His personal feelings are well expressed in a poignant "How far we are today from the rules of international law developed in the age of limited warfare! Modern war is merciless, it does not spare pregnant women or infants; it is indiscriminate killing and destroying. It does not respect the rights of neutrals. Millions are killed, enslaved, or expelled from the dwelling places in which their ancestors lived for centuries. Nobody can foretell what will happen in the next chapter of this endless struggle." (1996: 832) Mises did think that the interests of the state and people often conflicted, in fact he savaged the "liberal philosophers" who "constructed the vague image of a government whose only objective is to make its citizens happy" precisely for neglecting this point. (1996: 690) Why in that case though must the people, as one, fight for the state?

To be sure, he condemns warlike mentality and argues for "supplanting of the militaristic ideal, which esteems only the warrior and despises honest labor. There are nations," Mises explains, "in which transient atavistic impulses toward plunder and violence, which one would have presumed to have long since been mastered, still break out and once more gain ascendancy. But by and large, one can say of the nations of the white race that today inhabit central and western Europe and America that the mentality that Herbert Spencer called 'militaristic' has been displaced by that to which he gave the name 'industrial.'" (1985: 151) Moreover, Mises denounces war as such, arguing that "not war, but peace, is the father of all things" (1996: 24).

He has nothing but disdain for those who argue to the effect that "civilization, in creating unnatural humanitarian laxity which alienates man from his animal origin, has tried to quell these impulses and appetites [to fight, to kill, and to destroy]. It has made civilized man a

decadent weakling who is ashamed of his animality and proudly calls his depravity true humaneness." (1996: 170) One of the arguments Mises uses in this connection is ad hominem, but he employs a particularly potent version of it: a charge of performative contradiction: "It is noteworthy that the men who were foremost in extolling the eminence of the savage impulses of our barbarian forefathers were so frail that their bodies would not have come up to the requirements of 'living dangerously.' … The apostles of violence wrote their books under the sheltering roof of 'bourgeois security' which they derided and disparaged. They were free to publish their incendiary sermons because the liberalism which they scorned safeguarded freedom of the press. They would have been desperate if they had had to forgo the blessings of the civilization scorned by their philosophy." (1996: 172) This is beautiful argumentation, to be sure.

Mises' understanding of war has two other strong points. First is his contention that war need not eliminate free markets. For example, there is no need for price controls or inflation during a war. The best way to secure an advantage on the battlefield is precisely to utilize the productive power of private enterprise. He suggests merely that the government raise taxes in order to redirect production via the market mechanism of consumer sovereignty, and therefore "naturally," in a manner of speaking, into making weapons of destruction. The government becomes the preeminent consumer on the market during a war; only *consumption* by the people and not *production* by them needs to be sacrificed. "Unfair" or not, armies are best supplied with weapons of war under capitalism, Mises maintains. He warns again that "what makes war and capitalism incompatible with one another is precisely the unparalleled efficiency of the capitalist mode of production" (1996: 827-8).

Second is his insistence that wars be paid for entirely by the people involved in them. It is almost a moral imperative for Mises that the costs of war should not be shifted to the next generation, e.g., by government borrowing. Perhaps he thought that such a policy provided an incentive against wars.

At the same time, Mises is clear that *if there is a war*, then it is to involve one way or another all citizens. Again and again he speaks in terms of *nations* at war. And there is another side to having the government finance the war by taxing the people which is that the citizen who works for the war effort becomes a state employee. The line between citizens and soldiers is blurred. But if the public is financing the war, could they justifiably be targeted by the enemy?

Then there is his infamous and scandalous tirade on conscription: "But as conditions are in our age, a free nation is continually threatened by the aggressive schemes of totalitarian autocracies. If it wants to

preserve its freedom, it must be prepared to defend its independence. If the government of a free country forces every citizen to cooperate fully in its designs to repel the aggressors and every able-bodied man to join the armed forces, it does not impose upon the individual a duty that would step beyond the tasks the praxeological law dictates. … He who in our age opposes armaments and conscription is, perhaps unbeknown to himself, an abettor of those aiming at the enslavement of all." (1996: 282) Perhaps the atrocities of the wars that Mises had witnessed had hardened his heart. He himself never escaped the view that total war was an inevitable and permanent fixture of human existence.

The only other speck in Mises' eye I have noticed is the lack of his usual outspokenness about government-run or nationalized enterprises (GREs). Thus, Mises describes a certain interventionist argument as follows: "To ask that such public utilities should be self-supporting, is, say the interventionists, a relic of the old-fashioned ideas of orthodox finance. One might as well aim at making the roads and the public schools self-supporting." (1996: 856) It is as if the idea that schools and roads must be socialized is self-evident. Bureaucratic management, Mises opines, "is the case in the conduct of an institution on a non-profit basis, e.g., a school, a hospital, or a postal system" (1996: 310). He includes into the list of public enterprises subway systems and waterworks. (1946: 62) The problem is that Mises never draws a clear line separating public from private enterprises. If schools ought to be run by the state, then why not also farms and shoe factories? Mises does say that "grave arguments could be advanced in favor of restricting public spending and lowering the burden of taxation" (1996: 857). But such arguments are sparse in his works. I believe that he would nonetheless attack GREs on three grounds.

First, their ineptitude: "nationalized and municipalized enterprises… very often result in financial failure; their accounts regularly show losses burdening the state or the city treasury… due to the notorious inefficiency of the public conduct of business enterprises" (1996: 856). Second, lack of innovation and stagnation in them: "Under a bureaucratic system it is necessary to convince those at the top, as a rule old men accustomed to do things in prescribed ways, and no longer open to new ideas. No progress and no reforms can be expected in a state of affairs where the first step is to obtain the consent of the old men. The pioneers of new methods are considered rebels and are treated as such. For a bureaucratic mind law abidance, i.e., clinging to the customary and antiquated, is the first of all virtues. … Nobody can be at the same time a correct bureaucrat and an innovator." (1946: 67) Third, their consequences for economic computation: given a sufficient number of GREs, there will arise islands of computational chaos which will eventually join together and eliminate all rationality from the economy

as nationalization goes on and the economic system slouches toward socialism. Every new GRE contributes its share to harming society. Be that as it may, Mises could have been more explicit.

Hans-Hermann Hoppe (2002) theorizes that democracy has made fuzzy the line between rulers and subjects. Since entrance to the ruling class is alleged to be open to all (insofar as "any boy can grow up to be President"), the masses of common people have acquired the illusion that they are "ruling themselves." One of the results is that wars, which were once the province of kings who had to finance them from their own assets, and which scarcely touched the populace, have now expanded to include everyone. Democracy, in Hoppe's understanding, has been in part responsible for bringing back total war.

In a brilliant article Gene Callahan (2002) alerts us to a distinction between a civil association and enterprise association. The latter is "a group formed around a common purpose to achieve specific ends, and in which one must either work to achieve the stated ends or cease to be a part of the group. … Further, in so far as an individual is acting under direction of the enterprise as a whole, whether that direction is arrived at by a vote or by command from the top, the entire enterprise is responsible for the action taken. … However, an entire society… is not an enterprise association, but a *civil association*, united not by a single common purpose but by adherence to a *lex*, a system of law. It is an error to ascribe to the entire society blame for some particular activity undertaken by a group within that society." Thus, in regard to the Japanese government's attack on Pearl Harbor in 1941, Callahan continues, "even if support for Japan's military conquests was widespread in Japan, it certainly was not universal. Retaliation against those not in the military, such as the bombing of civilian targets, ignores this important distinction."

Richard Weaver (1995) argues that for war to retain any rationality, it must be looked at as a "chivalric" method of settling disputes: "When a nation has done its best, when it had exerted its maximum *lawful* strength, it accepted the 'arbitrament of the sword,' whether that was given for or against it. If against it, the defeated party had to admit that the other side had 'the better reason' and had to accept a settlement that accorded with that reason." (100) On the other hand, *total* war is madness unleashed, "a 'universal wolf' which must 'make perforce a universal prey, and last eat up himself'" (101). In the movie *Troy*, a war is averted by a duel between the best fighters of the opposing armies. How infinitely more civilized that would be!

Martin van Creveld (1999) describes "how states, having discovered the forces of nationalism…, transformed themselves from instruments for imposing law and order into secular gods; and how, having increased their strength out of all proportion by invading their

citizens' minds and systematically picking their pockets, they used that strength to fight each other (1914-45) on such a scale, and with such murderous intensity, as almost to put an end to themselves" (viii). The 20th century was one of serious retrogression.

As Rothbard (2000) puts the matter trenchantly,

> Especially has the State been successful in recent centuries in instilling fear of *other* State rulers. Since the land area of the globe has been parceled out among particular States, one of the basic doctrines of the State was to identify itself with the territory it governed. Since most men tend to love their homeland, the identification of that land and its people with the State was a means of making natural patriotism work to the State's advantage.
>
> If "Ruritania" was being attacked by "Waldavia," the first task of the State and its intellectuals was to convince the people of Ruritania that the attack was really upon *them* and not simply upon the ruling caste. In this way, a war between *rulers* was converted into a war between *peoples*, with each people coming to the defense of its rulers in the erroneous belief that the rulers were defending *them*. (66)

Given this, let me suggest how Mises may be acquitted. He correctly considers the state to be an organization that is chartered by the entire community for the sole purposes of supplying criminal justice, administering commonly owned properties, if any, and managing a few local external economies and diseconomies. How can an enterprise so fundamentally limited and answerable to the entire people turn against society and ruin the economy through war, nationalization, inflation, and all the rest? Where does the assumption that the state can play with the economy at all come from, anyway?

The state's overriding function is to protect the citizens from individual gangsters. To be sure, the executive branch of the state must itself be monitored for any skulduggery, but that is the job of the private courts and the city council. It is the socialist and interventionist *ideologies* that have imbued the state – this strange institution of securing social peace – with absolute power to do anything it pleases. But the state is simply the largest and most powerful "public" gang to which the people have reluctantly submitted so that violence from smaller "private" gangs could be suppressed and deterred. The state is a tool of survival, not cultural and economic progress, of punishment, not production and pleasure. It makes social cooperation possible, but it is not social cooperation. How could *anyone* mix these up? Yet this is precisely what has happened. Thus, total and perpetual wars too came to have a strong ideological component; they are imagined by their

supporters to be righteous and good, the carnage and destruction often justified as promoting precisely democracy. Formerly one of the four horsemen of the apocalypse, wars are now considered to be a way of making the world a better place. (To be fair to modernity, I will ask when in truth have they *not* been seen as such? The holiest defenses have always been reserved for the vilest uses of violence.). The interesting for our purposes piece of ideological garb in which wars are clothed is the notion that war can bring prosperity to a nation. Let's consider some possibilities.

First, there is the opportunity to plunder the defeated enemy. This, however, falls prey to the inevitable outcome of a Hobbesian war of all against all: in such a world war is perpetual, and life is "solitary, poor, nasty, brutish, and short," though it is the lives not just of individuals but of nations.

Moreover, (total) war dissolves the international division of labor (and the *threat* of a war prevents the world markets from uniting in the first place). In fighting the enemy, a nation wipes out its own trading partners. Any desire for plunder must take into account the possibilities (1) that after bombs have reduced cities to rubble there will be nothing left to take and (2) that killing the other side's people even without destroying property will cut future production short. Therefore, a libertarian can impart a certain worldly wisdom even to a "mighty potentate" à la Mises: "He is convinced that victorious war is an evil even for the victor, that peace is always better than war. He demands no sacrifice from the stronger, but only that he should come to realize where his true interests lie and should learn to understand that peace is for him, the stronger, just as advantageous as it is for the weaker." (1985: 24) There prevails, in Mises' view, the "futility of victory" (1996: 832). The idea to which some warlike "conservatives" contemptuously refer to as "economism," namely, the claim that strong economic ties and foreign trade discourage wars between the nations so connected, is entirely true. Can anyone imagine the citizens of one town ganging up on the citizens of another? If not for state governments repressing violence between cities, would there be endless internecine slaughter?

Second, a nation may profit from selling weapons to all parties involved in a conflict. In so doing it is like a skeleton dancing on the ruins of the world. In the end it is likely itself to be drawn into the war. At any rate, under peace, the weapon-supplying nation would specialize in producing articles beloved by the consumers not governments. What is *seen* is the profit from the sales of weapons. What is *not* seen is the profit that would also occur by selling desks and smartphones and so on if only there were peace. Unless a nation were unusually skilled at making weapons (and why should it be?), it would not care what to produce. Indeed, I am assuming such cynicism and agreeing with Mises'

thesis that the market will manufacture whatever is being demanded, whether nuclear bombs or mere textbooks for students describing how nuclear bombs operate.

Third, in a severe depression the government may conscript the unemployed to fight as soldiers in a war. It will thereby deal with a "political problem": perhaps the unemployed are fertile ground for revolutionary ideas. Now under a genuinely free market there is no such thing as permanent unemployment. Such a phenomenon is always the government's own creation. To allow the government to kill the very people whom it has put out of work is to put a premium on creating severe depressions. It is to remove any incentive the government might have not to wreck the economy. This won't work either.

Finally, we come to the Keynesian view that a war can help by "stimulating" the economy with government spending. E.g., Paul Davidson (2009) is explicit about this: "[Franklin Roosevelt's] spending on winning the war financed by huge government deficits proved… that the government could always play an active role in guaranteeing full-employment prosperity for its entire civilian labor force." (144) Remember that Keynesians do not care if their "public works" are useful or not. The only things that matter are the amount spent and the multiplier. But it is hardly a long step from the indifference between useful and useless to the indifference between useless and destructive. Beating plowshares into swords may keep people busy, but to what end? And now the fiscal policy is openly admitted to destroy the things that make people happy, both in its capacity of having an opportunity cost of unmade consumer goods and when government bombs blow up public and private properties. The "multiplied" private spending is supposed to rebuild the shattered societies and, to add insult to injury, be a pleasant activity. An obvious rejoinder is to ask: "What is to guarantee that the multiplied spending will not be destructive, either?" Full employment can be generated just as well when people are busy purposefully grinding goods into dust. Keynesians make a fetish, an end in itself, of employment as such, forgetting that it is only a means.

Having extolled war, Davidson continues that Eisenhower's "building the interstate highway system… created profits and jobs in construction and related industries" (145). The highway system could have developed privately in obedience to consumer rather than government preferences. In addition, Davidson neglects opportunity costs. Because resources were forcibly tied up in highways, which industries were never created, which suffered losses, and which lost jobs?

This madness must stop. One cannot save a village by destroying it, and one cannot make the villagers richer by acts of making one's own monstrous infernal weapons and destroying those of other people.

20. That the government's size and deficits feed off each other

Gordon (2009) considers both the size of the government measured in its spending as compared with the GDP and government budget deficits to be "policy instruments" but separate ones. "A given government deficit can be achieved with high spending and high tax rates or with low spending and low tax rates." (453) That surely is not right. A small government whose tax revenues are $1 billion cannot possibly run, say, a $1 trillion deficit. It is impossible both politically in that such a comparatively enormous borrowing will never be permitted by the voters, economically insofar as such borrowing will severely disrupt the markets, and financially because no one will lend the government so much money. Only a "big government" can afford large budget deficits and accumulate a large public debt. That was the point of Hyman Minsky's claim first examined in (II, 4) that a big government can allegedly prevent depressions but at the cost of stagnation and inflation.

It is interesting that Keynes has few kind words to say about "the rentier." In fact, he is partial to "euthanizing" him. Yet he never mentions the fact that the interest on government debt goes from productive individuals and companies to "idle" bondholders. This burden can slow down investment and business activity. For example, "history does not provide any example of capital accumulation brought about by a government. … What individuals had saved was dissipated by the government." (Mises 1996: 851) Steven Landsburg (1997a) suggests that deficits do not matter, i.e., present no special problem. (Ch. 15) He is correct in the sense that if a person does *not* care about future generations, then he can live it up and leave them with nothing even in the absence of government deficits; on the other hand, if he does care about those generations, then he can provide for them just as well even if the various governments *are* running deficits. For he can leave a bequest which will collect interest and help his grandchildren pay the higher taxes due to interest on government debt. I fully agree that the man who arranges a bequest will essentially be taxing himself in order to neutralize the effect of government borrowing, "converting" for himself debt into taxes. Ricardian equivalence cannot of course be pushed too far. For example, tax policy is more predictable than "deficit policy." The entire point of deficit finance is to evade the will of the voters regarding tax policy. Deficits are fundamentally discretionary, resorted to whenever the state finds doing so expedient. Thus, the voters may elect congressman Smith who promises not to raise taxes. Smith may also proclaim his desire to balance the budget. We can see the difference right away: Smith *preserves* taxation but *abolishes* deficits as

an institution. But if there are deficits, voters have little power to authorize the amount of the deficit or a particular way of financing it. Deficit spending is undemocratic also because it should be possible to cut or eliminate any article of government spending if the legislature, such as after a new election, so wills. But interest on debt is a legal contractual obligation that cannot be cut other than by paying the principal. It is often a stubborn perpetual burden on the people. Different ways of financing deficits also have different short-term effects. In any case, deficits matter for the same reasons why taxes matter. Both are inimical to prosperity.

Consider, for example, taxes on business profits. One of their consequences is that the marginal investment projects (which would be profitable without the taxes but are unprofitable with them) will not be undertaken. Taxes discourage creative human actions by reducing the rewards from such actions yet preserving the risk. Before a businessman has earned his profits, there was a chance, in part quantifiable and in part not, that he would earn less, nothing, or lose his money altogether. The prospect of high gains was for him necessary in order to decide to take the risk at all, to enter the competition which produces both winners and losers and in fact must by necessity produce both. If their income is taxed away, then marginal entrepreneurs will choose not to start new businesses or expand existing ones because the reward will be made by taxes too small to bother with the risk. (The risk may be lowered eventually as *other* entrepreneurs drop out of competition, but then the risk to reward ratio was unacceptable to *them*.) John Maurice Clark writes about a businessman reasoning about a potential investment as follows: “If we lose, we lose. And if we win, the government will get most of it. I guess we won’t go into it.” (Haberler 1951: 303) Here I mean that well-advised, i.e., non-Fed-initiated, risk-taking will fail to take place. The tax burden slows down the creative advance.

The U.S. government has seen fit to deal with its enormous debt in several ways. First is inflation which whittles down the real burden of the debt. Second is government growth as a proportion of GDP which makes old debt appear trivial. Third is engineering a ploy to make the dollar a world reserve currency such that foreigners would be steered into financing U.S. government deficits. It is plain that these ways of diminishing the threat of the debt to the federal government’s solvency correspond to the ways of financing the deficits which make the debt bigger. The government can borrow from its own central bank, from the citizens, and from foreign central banks. Of course, the bigger the deficits, the higher the debt, the greater the size of the state and its spending, the smaller the deficits of previous years seem in comparison with the deficit of the succeeding year, and the higher the next year’s

deficit can be.

Inflation and the power to inflate are particularly interesting. Both the banks and federal government benefit from inflation but in different ways. For the former there are three such benefits. First, fractional-reserve banks can now treat checking and saving accounts as CDs and loan them out, even though these are redeemable on demand. Banks do not bear the cost of paying interest on such deposits. Second, they can loan out a lot more cash than they have in reserves. Third, they enjoy a much-reduced possibility of business failure or bankruptcy. The Federal Reserve stands ready to loan the banks any amount of cash to help them with any difficulty. This protection from entrepreneurial errors courtesy of the paternal central bank makes banks somewhat like government enterprises: it causes listlessness and lassitude, discourages innovation, creates a moral hazard to lend sloppily, and makes banks less interested in serving consumers. In the U.S., unlike in some other countries, as of right now, the expansion of the money supply does not *directly* benefit the federal government. That is, the Treasury cannot order the Fed to buy its newly issued securities (insofar as the Fed reports to Congress not the executive branch and is otherwise independent), it has to compete for capital on par with everyone else. But it nevertheless enjoys the following three advantages.

First, it benefits from inflation in the same way any other borrower does: it gets to borrow money at lower interest rates. Second, it pays no interest at all on securities held by the central bank. As the Fed itself states, "Federal Reserve Banks are not… operated for a profit, and each year they return to the U.S. Treasury all earnings in excess of Federal Reserve operating and other expenses." Third, unlike private debtors, the government never has to pay back the principal. The debt is not expected to be retired. Everybody knows and is resigned to this. When the bonds mature, the Treasury issues new bonds of an even greater total value to pay off the old ones. This is a Ponzi scheme made more attractive by the fact that the Fed's never-ending money creation puts more cash in the hands of the public and lowers the interest rates the government has to pay if it borrows from the public. In this way, the debt is never paid but is continuously "monetized." The government enjoys interest-free money which it never expects to pay back which causes the debt to grow every year. An organization could not have gone into $30 trillion (as of 2022) debt without the ability to inflate. Not even the power to tax would have been of help here. At some point the lenders would have realized that any attempt actually to repay the debt would ruin the economy, interest rates would have skyrocketed, and the government would have had to default.

Americans keep buying government bonds because these bonds are backed "by the full faith and credit of the U.S. Government."

Foreigners do because the world is on a dollar standard, and for now there is nothing better. And the *Fed* prefers to buy government debt in its open market operations, and moreover it may be instructed (it depends whether secretly or not) to do so by the government in order to facilitate the latter's fiscal policy (remember that the monetary and fiscal policies must be in sync in order not to produce a *complete* catastrophe). That is why, for example, from 1995 to 2005, the value of the Fed's portfolio increased almost twofold – it is the means by which the swindle continues. And it will keep increasing until a real reform takes place.

The threat of massive inflation is precisely what has kept borrowers willing to buy so much U.S. government debt. They know that the state will never default. But this threat is like mutually assured destruction: if the feds actually go through with it, it will be a disaster. The borrowers realize that in the case of an economic collapse, they will be paid back in money of much lower purchasing power. This, however, is not enough to deter them: in the opinion of most people, the power of the U.S. government is eternal. Thus, people worry about actual hyperinflation while enjoying the benefits of possible one. Perhaps they do not even worry about it, for two reasons. First, folks think that their profits as creditors are "private" whereas if the U.S. does go down in flames, then they "collectively" will have more to worry about that their own petty losses. They will not suffer the opprobrium of being bad entrepreneurs because *everyone* will be in trouble. Stated differently, in a normal Ponzi scheme, if a person thinks that a possible investment opportunity is a scam, then he may be wary of committing money to it because he may turn out to be one of the last investors after whom the scheme will quickly unravel. He will be left holding the bag while the early investors may already have received high profits. But in a Ponzi scheme in which the tricksters have the power to print money, any investor realizes that if push comes to shove, then *everyone* will suffer from hyperinflation and not just the newest lenders. Every holder of U.S. dollars except the government, potentially billions of people will be fleeced. He will not be proven a sucker. I don't know how big a consolation that is, but it may play a role. Second, the actual event of the destruction of the dollar, a kind of mini end of the world, feels so improbable to them that they figure that it can safely be treated as impossible for all practical purposes. Most people do not believe that it needs to be hedged or insured against.

Now I do not of course think that inflationary monetary regimes benefit the world or even Americans. It is true that certain advantages to the people ruled by the central bank in control of the world reserve currency and to the state owning this bank do exist, ephemeral and negative-sum though they are in the long run. But sound money has the

power not only to propel economic progress forward much faster but also to foster goodwill in the entire world. It is a genuine means to both prosperity and harmony.

The size and power of the state are perpetually enhanced by the state's going into ever higher debt by means of ever higher deficits. Conversely, the always growing, year after year, deficits are possible only because of ever bigger government. These two fuel each other in a vicious cycle and make any kind of "limited" or "constitutional" government an impossible ideal to reach.

21. That the Keynesian objections to free trade fail

The law of comparative advantage illustrates the benefits of division of labor. Paul Davidson (2009) attacks it on three grounds. First, he argues that for a number of industries production can proceed in different areas of the planet with equal efficiency. Therefore, "mass production industries… are likely to locate factories in those nations where the economic system values human life the lowest" (112). Now the reason why Chinese workers are poor is because of low amount and quality of capital, both human and physical, that is invested into them. In the free market one's wage tends to approximate one's DMVP, and one's DMVP is increased when powerful equipment and tools are used in the workplace. But for as long as the poor nations remain poor, the law of comparative advantage takes a particularly strong form because rich nations can specialize in capital-intensive projects, and poor nations can specialize in labor-intensive projects. Global efficiency is thereby increased: in economics diversity is strength. Davidson writes: "Under current conditions, free trade with low-wage nations is not free competitive trade at all since the U.S. law prohibits American entrepreneurs from matching Chinese labor hiring and working conditions." (113) Is he serious? American entrepreneurs *cannot* pay their workers as little as Chinese entrepreneurs do, law or no law, because of these workers' high productivity. The butler paradox shows how even a laborer who uses no capital in his work, such as a butler, benefits from capital accumulation in his community and enjoys ever higher wages. This is because his employer is always in danger of losing him to capital-intensive projects elsewhere in the economy where he will be ever more productive and so must offer an increasingly higher (real) wage to prevent that from happening.

So, while China remains poor, Americans retain a competitive advantage in capital-intensive industries. It is therefore absurd to hold that free trade will "reduce the wages of American workers to less than a dollar per hour and simultaneously permit American children to work

in factories, as Chinese children do, so that the family can earn enough to avoid starvation" (112). That is assuredly not going to happen. On the other hand, if "the East ultimately will attract enough foreign capital… to meet global demand" (118), and China becomes as wealthy as the U.S., then American workers will again be in no danger of becoming poor precisely because division of labor will be beneficial even if China is better than the U.S. at producing everything.

Our author in addition has a faulty view of competition. His reasoning is that competition, if it is to be legitimate, must be somehow fair, as though a footrace. But the consumers, for whose sake the competition commences, have no such scruples. Their welfare is served best indeed under radical "inequality of opportunity." Moreover, American entrepreneurs have no duty to pay high wages to American workers. Escaping overseas into China and collecting the benefits of cheap labor is not a violation of any plausible moral law. The notion of fairness of catallactic competition is nonsensical.

Second, Davidson argues that it is not obvious that the superadded fruits of the division of labor will all find buyers. Well, to be sure, an individual producing for himself will have an easier time not making entrepreneurial errors than an individual producing for other people, the consumers. But what of it? All people by their actions have demonstrated a preference for a greater abundance of goods brought about by division of labor. No one wants to go back to autarkic conditions, especially for such a silly reason as that when he, in some dystopian future, grows his own food, he might be able to produce tomatoes that suit his taste more precisely than the tomatoes grown by farmer-entrepreneurs in a large and sophisticated economy.

Third, Davidson points out that the law of comparative advantage holds only under the assumption that neither capital nor labor is mobile across national boundaries. This is entirely true. But Davidson is mistaken if he thinks that the experience of today's world in which the mobility of both capital and labor is higher than it has ever been before refutes free trade. On the contrary, given such mobility, there is no longer any essential difference between national and international trade. Both stand or fall together. Capital travels to labor and vice versa, and the same wage eventually is earned for the same work everywhere in industries not tied to a particular parcel of land as agriculture and mining are in some cases tied. If Davidson considers free trade between the states composing the United States to be fine and good, then he must, on pain of contradicting himself, find free trade between the United States and Canada fine and good as well, and with that also between U.S. and China.

The law of comparative advantage illustrates that even under the worst possible conditions in which only consumer goods cross national

borders, though not capital goods or labor – that even then international trade benefits all parties. Davidson claims that as a result of free trade, "in the West, production and employment in the tradable goods industries will decline substantially, if not completely" (118). It certainly will not. If the West wants to enjoy the fruits of social cooperation with the East (and why wouldn't it?), it is just going to have to specialize in producing something that the East wants.

The anti-economist Taleb (2010) condemns globalization for a different reason. He thinks that it is efficient "naively": if there is an unexpected change, then a specialized nation will suffer gravely, having invested too much into achieving competence in a field that is perhaps no longer valuable. Now before there is specialization between nations (which is useful to acknowledge because each nation is governed by a state with its own legal system which influences the areas of specialization), there is specialization between individuals. It is true that if Smith is a computer programmer, then if the demand for programming were to slacken, then Smith would have to contend with lower wages or become unemployed and "forced" to learn new skills. That danger does not entail that specialization is foolish, nor that people should be exempt from the market responsibility to forecast which occupations will be more stable than others. There is never a chance to escape the necessity to commit to something (a project, a spouse, a personality) just because making the choice is potentially fraught with error. On the contrary, the mutual dependence of people in a global web of trade creates useful "redundancies" (Taleb's term). A small isolated community can starve if a single harvest is ruined by a natural disaster. On the other hand, if tomorrow the entire Latin America vanished into thin air, there would still be coffee available to the folks in the U.S. The existential plight of *entrepreneurs* – risk and surprises, requiring constant exercises of prudence and courage – serves the *consumers* adequately.

Now to be sure, that there is so much capital accumulated in the U.S. and so little elsewhere is a settled historical fact. For example, the U.S. has enjoyed a strong tradition of liberty and respect for private property rights which contributed to its affluence. A company that wants to outsource its labor force to a poor country will at first be immune to the butler paradox because of intense worker competition there. As long as there is little capital accumulation overall in society, a firm can import even the most sophisticated tools and still save a bundle on labor costs. A worker will be very productive in that firm's line of business but receive low wages since his community will still be poor until the amount of capital invested per worker reaches some critical mass.

Immigration presents its own complications. If both capital and labor are mobile, then abstracting from the political problems of mass

immigration, and even assuming that only *labor* is mobile, i.e., unemployed people cannot move easily (contrary to all reason, because it is precisely the unemployed who are most in need of relocation services), it is the case that the capital presently concentrated in the U.S. will become "spread" over more people; the amount of capital per capita will decline. Hundreds of millions of people will want to move to the U.S., and firms will want to move out of the U.S. This would improve the standard of living of the poor in undeveloped countries but indeed lower the standard of living of the American workers. Imagine half of Africa suddenly moving to the United States. It is unlikely that the wretches will arrive with any capital goods in tow: tools, gear, machinery. Before, native Smith was a construction worker and was comfortably matched in his job with various complementary produced factors. Now there are five more people competing with him for the use of those capital goods. The marginal productivity of labor within America falls dramatically. Smith is poorer to that extent even if the immigrants are somewhat richer. It is this and not the possibility that immigrants may take advantage of the welfare state that has people worried about opening up borders. It is important to note a major economic difference between inflows of labor into a country and outflows of capital from it. Mass immigration *punishes* a country for its good government: the better the political and legal system, the greater the general prosperity, the more foreigners will want to move in, *lowering* the standard of living of the natives. Open borders is a very egalitarian policy in a bad sense of "equal penury for all." If poor countries respond to the migration by having more children, their poverty will not even be relieved. On the other hand, capital movements *reward* a country for good government: the better the legal system, the more money foreigners will want to invest, *raising* the standard of living of the natives.

However, as economists, we must not take the parochial view of "America first" but be mindful of the interests of the entire world. Marshall (1964) argues that "custom in a primitive society… prescribes an attitude of hostility to strangers. In a modern society… neighbors are put more nearly on the same footing with strangers. In ordinary dealings with both of them the standard of fairness and honesty is lower than in some of the dealings of a primitive people with their neighbors: but it is much higher than in their dealings with strangers. …sympathy with those who are strangers to us is a growing source of a kind of deliberate unselfishness, that never existed before the modern age." (5) That was, of course, written before the mass slaughter of World War I. But the devil's century has finally left us, and we should struggle to live up to Marshall's observations of the state of affairs in the 19th and early 20th centuries. Even in the unique situation in which we find ourselves, there

is everything economically right about free trade between all nations. This is the fastest "path to global economic prosperity" in the long run.

Do the Mexicans, say, take American jobs? Assuredly, they do. However, in order for the situation to be ameliorated, it would be sufficient that for any 50 Mexicans who become workers here, 1 becomes an *entrepreneur* and *creates* jobs both for his fellow Mexicans and for Americans as well. The whole reason why this rarely happens is that Mexican illegal immigrants have no standing under U.S. law. How could they become entrepreneurs with all the settled responsibility (such as at least a *permanent address*) that this implies if they cannot even get driver's licenses legally? We need to retain and even reinforce the privileges of citizenship: immigrants should not be able to vote or be elected to public office, but the status of "illegal immigrant" ought to be abolished. What Mexicans do take is the use of *capital* that is clustered in the U.S. But that too is scarcely relevant because if Americans enjoyed sustainable economic growth with sound money and banking, no taxes beyond the local, and the rest of my pleasant visions, then they would be happy to "share the wealth" with the Mexicans. In all probability there would be an immense sense of pride that America is such a magnet for immigrants. And as we've just seen, a great political system would attract capital back into the U.S., as opposed to the current incentive to companies to go overseas. The American system of government needs to stay competitive and *improve*, not deteriorate. Banish the cynical thought that good government (and in many cases no government) is a pie in the sky. It is a laudable goal, worth fighting for, and never a lost cause. An evil empire can last for a century, look impregnable, and disappear in a day.

There is even more to it. An increase in wealth brought about by capital accumulation will strengthen the incentive to people to have more children. Now people purposely limit the number of children they have precisely to enjoy the fruits of their labor. Children are expensive in two senses. First, as helpless infants to their parents. Second, even when they grow up to society at large, that is, to each other as workers competing for jobs and bidding down wages. Regarding the first sense, in times of peace and prosperity, people's happiness may overflow into their kids. I fully endorse the wisdom of St. Thomas that the "generation of offspring for the multiplication of the human race" is a "great blessing" (*ST*: I, 98, 1). The "optimal" population size can only be discovered and reached under an unhampered free market with the aid of the individual and family responsibility promoted by it. Regarding the second sense, division of labor and accumulation of human capital turn the "cost" into benefits. A growing population can benefit everyone. There may also be synergies between many skilled professionals who work in close proximity with each other (such as in one city) that

amplify their productivity. There may even be a situation in which there is a serious "shortage" of labor in a growing industry: they would like to expand but can't. Then accumulation of novel capital must slow down, and complementary to capital labor must be found either by means of capital goods physically moving to workers or vice versa. The latter can relieve the scarcity of workers and reignite economic growth.

It may be readily objected that we are far from the happy surfeit of capital under consideration. That is true, but that is *our* fault. And in the second place, the poverty of other nations will under freedom of immigration cause a tremendous influx of people into the more prosperous countries. True as well, but that is now *their* fault. What both faults have in common, however, is that they stem from similar anti-laissez-faire ideologies and *from Keynesianism in particular*. If Keynes were decisively refuted, and if nations quit ruining their own economies, then immigration policy would become a nonissue, and freedom of movement (restricted only by private property rights) would in not-so-distant future reign throughout the world. The reason is again that free nations, like happy families according to Leo Tolstoy, are all alike in the most important ways. "The funniest thing about Europe," says Vincent in the movie *Pulp Fiction*, "is… the little differences." In other words, cultural differences. Laissez-faire capitalism in country *A* will make it less likely for a person to feel the need to emigrate to country *B*. The pressures on countries with a high standard of living now treated crudely with coercive immigration controls will subside. Insofar as people do move around, there will be no easily identifiable pattern to the migrations, just as it is hard to track how Americans move throughout the very porous states, cities, and neighborhoods within the United States.

A useful measure of general happiness is precisely immigration. If more people move from country *A* to country *B* than the reverse, voting as it were with their feet, then country *B* must be doing something right. David Friedman (1995) understood well the civilizing effects of the ability to emigrate: "Consider our world as it would be if the cost of moving from one country to another were zero. Everyone lives in a housetrailer and speaks the same language. One day, the president of France announces that because of troubles with neighboring countries, new military taxes are being levied and conscription will begin shortly. The next morning the president of France finds himself ruling a peaceful but empty landscape, the population having been reduced to himself, three generals, and twenty-seven war correspondents." (123) Brain drain, tax competition can deter governments from doing mischief.

Having dealt with Davidson at this point fairly thoroughly, I am no longer certain whether he can claim for himself the mantle of economist. Keynes, for all his own faults, deserves a worthier champion.

Notes

1. I do not mean to imply that “unregulated” means “shady.” On the contrary, unregulated means free-market which in turn means socially virtuous. Regulation of business by government aims, due to the nature of the regulatory process, to protect not the consumers but rather the profits of the dominant firms in the regulated industry precisely to the detriment of general welfare.

2. If, however, I’m wrong, and the textbooks are describing the relation of the equation of exchange $P = c / Q$ where c is a constant equal to MV, then (1) I do not see what this has to do with “aggregate demand”; (2) none of the three “effects” explain the dependence; and (3) the causation of wrong because it’s Q that’s the independent variable that determines P, not vice versa.

3. This is not an evaluation of Hicks’ complex mathematical business cycle theory, merely my own attempt to trace the logic of the multiplier-accelerator argument.

Conclusion

That Keynesian economics is a dead end

Keynes sought to aid mankind by forcing people to live according to his, Keynes', ideals, coercively to promote the contemplative life at the expense of the active life, to obviate the need for cardinal virtues. He left only ruin and desolation in his wake. He was simply a fool, a clever one but a fool nonetheless, who turned the world upside down. He aspired to heaven, as he conceived of it, yet took the economy to hell with him on the road paved with allegedly good intentions. The Soviets venerated Marx, Engels, and Lenin as saints. In fact, to the extent that ideas have consequences, these men were some of the world's most notorious intellectual criminals. They were serial killers of whole societies. To that unholy trinity Keynes must now surely be added.

Consider that the original aim of minimum wage laws was to restrict competition by black and female workers in favor of white males. The laws were thus "racist" and "sexist," but they sufficed for their intended purpose. Today leftists have forgotten these eugenic ends themselves but now exalt the nonfunctioning means – minimum wage – as crazy and scandalous ends in themselves. Likewise, modern Keynesians do not read Keynes and are unaware of his bohemian "religion" of truth, love, etc. which his economics was designed to bolster. Instead they push his policies which otherwise, when separated from Keynes' own personal confession of faith, defy logic.

So now, to imitate Seneca, Keynesianism is regarded by the common people as true, by the wise as false, and by the rulers as useful.

To imitate Marx, the socialism of the 20th century was a tragedy, with so much idealism and noble moral resolve directed into an insane cause of utter destruction and cruel tyranny; the Keynesian interventionism of the 21st is a farce. Our economy is a barrel of laughs to anyone conversant with economics, and Keynes, usually garbled but sometimes also in a more pristine form, gives ample opportunities to secondhand dealers in ideas to embarrass themselves, in print or on national TV. The "great secret" to making either socialism or interventionism work, kept by the Pharaoh's magicians, is that it doesn't exist. There is no denying that the magicians have *some* power, but

ultimately they are frauds. Their great god State still fails to deliver.

As we saw earlier, Keynes had deified the state. He was Marx's nonviolent brother in faith, seeking "somewhat comprehensive socialization" that "can be introduced gradually and without a break in the general traditions of society" (*GT*: 378). This book deals with positive and value-free economic science. But if it can be a call to political action, then its contribution will lie in the refutation of the specifically Keynesian rationales for government taxation and counterfeiting. Since the fiscal and monetary policies produce results opposite those their supporters claim to want to achieve, opposite indeed to business stability, growth, high employment, and stable price level, we must consider them to be merely pseudoscientific pretexts for tyrannizing over and looting the populace. The state tricks people into submitting to taxation and inflation by falsely claiming that these things are for the greater good. For example, the progressive income tax is sometimes justified on Keynesian grounds as an "automatic stabilizer." "Redistribution of wealth" from high-income to low-income people is defended because it will stimulate "consumption." Government spending, Keynesians claim, is more "effective" than cutting taxes by an equal amount because some of the private incomes can be saved. Deficit spending is deferred taxation since interest on debt must be paid with future taxes, and inflation is hidden taxation that attacks people with higher prices. We saw how Minsky extolled "big government" as a depression fighter. Without this ideological cover, the state will become less predatory, all to the good.

Economists agree on valuing stability, growth, employment but disagree on how to attain these ends. Some are "activists" who favor deficit spending and money printing to deal with the business cycle. Others are "nonactivists" and are more restrained. I, in contrast to both groups, recommend *destroying the state*, such that there *will be* no entity that can be either more or less active. Federal taxes are to be abolished, money is to be fully privatized, and 100%-reserve banking is to be enforced at the state level. Then the business cycle will be gone for good. Economic stability is not any particular fiscal or monetary "public policy." It is the complete absence of any such policies. The only policy suitable for a civilized society is strict enforcement of private property rights.

For example, Bruce Littleboy (1990) makes the following analogy:

> … suppose that you prick your little finger. Clearly, the body's restorative mechanisms can normally cope with this disturbance without the need for surgery. Contrast the case of a gunshot wound. A naive classicist, who argues that no man could ever design, understand and therefore improve upon the

> performance of a system as miraculous and complex as the human body, would be a positive menace to have as your doctor. Even rudimentary first aid is better than doing nothing. (21)

This implies that the government is the doctor when in fact it's the shooter. The objection that perhaps the government is *both* the shooter and doctor and hence is not all bad only adds insult to injury. As Harry Browne put it, the government breaks your legs, hands you a crutch, and says, "See? Without us, you wouldn't be able to walk." The market should exercise its Second Amendment rights.

In regard to financial crises, then, there is another choice, different from both the straitjacket of socialism and the faux-capitalist interventionist chaos with laws on the one hand so complex that no one understands them yet on the other hand apparently not complex enough to prevent antisocial behavior by the financial elite. The reform I am proposing will harmonize the interests of the 1% and the 99%, countering the state's ubiquitous divide and conquer strategy. (Capitalism, the social system that harnesses the talents of the best 1% and drives them to act in the interest of the other 99%, must be *purified* not destroyed.) It will limit the government's imperial ambitions: unable to monetize its debt, it will have more trouble starting wars. All that it takes is a bit of thought about the fundamental nature of money and banking. The conclusion is inevitable: put the choice of money into the hands of the people, and check credit expansion at the source by crushing the ability of banks to deceive their own customers by loaning out the cash entrusted to them for safekeeping.

Let sound money and honest banking bring peace to our world.

References

Works by Keynes, with abbreviations

TM: (1930). *Treatise on Money*. 2 vols. London: MacMillan.

GT: (1936). *The General Theory of Employment, Interest and Money*. London: MacMillan.

(1937). "The General Theory of Employment." *The Quarterly Journal of Economics*, vol. 51, no. 2, 209-223.

CW: (1978). *The Collected Works of John Maynard Keynes*. 29 vols. E. Johnson & D. Moggridge eds. Royal Economic Society.

Works by others, with abbreviations

ST: Aquinas, Thomas, Saint. (1947). *Summa Theologica*. Benziger Bros. ed., Fathers of the English Dominican Province trans.

Other references

Altshuller, Genrich. (2002). *40 Principles: TRIZ Keys to Technical Innovation.* Worcester, MA: Technical Innovation Center.

Ammous, Saifedean. (2018). *The Bitcoin Standard*. Hoboken, NJ: Wiley.

Bade, Robin & Michael Parkin. (2009). *Foundations of Macroeconomics*. 4th ed. Boston: Pearson Education.

Bateman, Bradley et al. eds. (2010). *The Return to Keynes*. Cambridge, MA: Harvard University Press.

Becker, Carl. (1932). *The Heavenly City of the Eighteenth-Century Philosophers*. New Haven, CT: Yale University Press.

Behe, Michael. (1996). *Darwin's Black Box*. New York: The Free Press.

———. (2007). *The Edge of Evolution*. New York: The Free Press.

Bellante, Don & Roger Garrison. (1988). "Phillips Curves and Hayekian Triangles." *History of Political Economy*, vol. 20, no. 2, pp. 207-234.

Bleaney, M.F. (1976). *Underconsumption Theories*. London: Lawrence and Wishart.

Böhm-Bawerk, Eugen von. (1959). *Capital and Interest*. 3 vols. George Huncke and Hans Sennholz trans. South Holland, IL: Libertarian Press.

Buchanan, James & Viktor Vanberg. (1991). "The Market as a Creative Process." *Economics and Philosophy*. 7, pp. 167-186.

Callahan, Gene. (2002). "Moral Equivalence?" *LewRockwell.com*, June 29.

Cassidy, John. (2009). *How Markets Fail*. New York: Farrar, Straus, and Giroux.

Chick, Victoria. (1983). *Macroeconomics after Keynes*. Cambridge, MA: MIT Press.

Cochran, John & Fred Glahe. (1999). *The Hayek-Keynes Debate*. Lewiston, NY: Edwin Mellen Press.

Csikszentmihalyi, Mihaly. (1990). *Flow*. New York: HarperCollins.

Davidson, Paul. (1978). *Money and the Real World*. 2nd ed. New York: Halsted Press.

———. (2009). *The Keynes Solution*. New York: Palgrave Macmillan.

Dillard, Dudley. (1948). *The Economics of John Maynard Keynes*. Englewood Cliffs, NJ: Prentice-Hall.

Dreher, Rod. (2022). "Biden Puttin' On The Dog." *American Conservative*, February 10.

Erikson, Erik. (1980). *Identity and the Life Cycle*. New York: Norton & Company.

Estey, James. (1956). *Business Cycles*. 3rd ed. Englewood Cliffs, NJ: Prentice-Hall.

Fisher, Irving. (1930). *The Theory of Interest*. New York: Macmillan.

———. (1936). *100% Money*. New York: Adelphi.

Fisher, Irving, et all. (1939). *A Program for Monetary Reform*.

Fitzgibbons, Athol. (1988). *Keynes's Vision*. New York: Oxford University Press.

Friedman, David. (1995). *The Machinery of Freedom*. 2nd ed. La Salle, IL: Open Court Publishing.
Garrison, Roger. (1996). "Central Banking, Free Banking, and Financial Crises." *Review of Austrian Economics*, vol. 9, no. 2, pp. 109-27.
———. (2001). *Time and Money*. New York: Routledge.
Goleman, Daniel. (2006). *Emotional Intelligence*. 10th Anniversary ed. New York: Random House.
Gordon, Robert. (2009). *Macroeconomics*. 11th ed. Boston: Pearson Education.
Gwartney et al. (2018). *Macroeconomics: Private and Public Choice*. Ed. 16E. Boston, MA: Cengage Learning.
Haberler, Gottfried, ed. (1951). *Readings in Business Cycle Theory*. York, PA: Maple Press Company.
Hahn, L. Albert. (1949). *The Economic of Illusion*. New York: Squier Publishing.
Hall, Thomas. (1990). *Business Cycles*. New York: Praegar Publishing.
Hansen, Alvin. (1953). *A Guide to Keynes*. New York: McGraw-Hill.
Hayek, F.A. (1948). *Individualism and Economic Order*. Chicago: University of Chicago Press.
———. (1960). *The Constitution of Liberty*. Chicago: University of Chicago Press.
———. (2008). *Prices and Production and Other Works*. Auburn, AL: Mises Institute.
———. (2009). *The Pure Theory of Capital*. Auburn, AL: Mises Institute.
Hazlitt, Henry. (1996). *Economics in One Lesson*. 50th Anniversary ed. San Francisco: Laissez Faire Books.
———. (2007). *The Failure of "New Economics."* 1959. Auburn, AL: Mises Institute.
Hazlitt, Henry ed. (1995). *The Critics of Keynesian Economics*. Irvington-on-Hudson, NY: Foundation for Economic Education.
Hicks, J.R. (1950). *A Contribution to the Theory of the Trade Cycle*. London: Oxford University Press.
Hobson, J. A., & Durbin, E. F. M. (1933). "Underconsumption. An Exposition and a Reply." *Economica*, 42, pp. 402-427.
Hülsmann, Jörg. (2000). "A Realist Approach to Equilibrium Analysis." *The Quarterly Journal of Austrian Economics*, vol. 3, no. 4, pp. 3-51.
———. (2002). "A Theory of Interest." *The Quarterly Journal of Austrian Economics*, vol. 5, no. 4, pp. 77-110.
Hutt, William. (1974). *A Rehabilitation of Say's Law*. Athens, OH: Ohio University Press.
———. (1979). *The Keynesian Episode*. Indianapolis, IN: LibertyPress.
Jones, John. (2008). *Keynes's Vision*. New York: Routledge.
Kaldor, Nicholas. (1982). *The Scourge of Monetarism*. New York: Oxford University Press.
Keirsey, David. (1998). *Please Understand Me II*. Del Mar, CA: Prometheus Nemesis.
King, J.E. (2002). *A History of Post Keynesian Economics Since 1936*. Northampton, MA: Edward Elgar Publishing.
———, ed. (2003). *The Elgar Companion to Post Keynesian Economics*. Northampton, MA: Edward Elgar Publishing.
Kirzner, Israel. (1992). *The Meaning of Market Process*. New York: Routledge.
———. (2000). *The Driving Force of the Market*. New York: Routledge.
———. (2013). *Competition and Entrepreneurship*. Peter Boettke and Frederic Sautet ed. Indianapolis, IN: Liberty Fund.
Knight, Frank. (1921). *Risk, Uncertainty and Profit*. New York: Houghton Mifflin.
Krugman, Paul. (2008). "When Consumers Capitulate." *The New York Times*, October 31.
———. (2009). *The Return of Depression Economics*. New York: Norton & Company.
Lachmann, Ludwig. (1994). *Expectations and the Meaning of Institutions*. Don Lavoie ed. New York: Routledge.

Landsburg, Steven. (1997a). *Fair Play*. New York: The Free Press.
———. (1997b). "Property Is Theft." *Slate Magazine*, August 3.
———. (2009). *Big Questions*. New York: Free Press.
Leijonhufvud, Axel. (1968). *On Keynesian Economics and the Economics of Keynes*. New York: Oxford University Press.
———. (1973). "Effective Demand Failures." *The Swedish Journal of Economics*, vol. 75, no. 1, pp. 27-48.
Lewis, Hunter. (2011). *Where Keynes Went Wrong*. Mount Jackson, VA: Axios Press.
Littleboy, Bruce. (1990). *On Interpreting Keynes*. New York: Routledge.
Livingston, James. (2011). *Against Thrift*. New York: Basic Books.
Loasby, Brian. (1976). *Choice, Complexity and Ignorance*. New York: Cambridge University Press.
Marshall, Alfred. (1890). *Principles of Economics*. London: MacMillan.
———. (1964). *Principles of Economics*. 8th ed. London: MacMillan.
Marx, Karl & Friedrich Engels. (2008). *The Communist Manifesto*. Lexington, KY: Brandywine Studio Press.
McGilchrist, Iain. (2021). *The Matter with Things*. London: Perspectiva Press.
Meltzer, Allan. (1988). *Keynes's Monetary Theory*. New York: Cambridge University Press.
Minsky, Hyman. (1982). *Can "It" Happen Again?* Armonk, NY: M. E. Sharpe.
Mises, Ludwig von. (1946). *Bureaucracy*. New Haven, CT: Yale University Press.
———. (1983). *Nation, State, and Economy*. Leland Yeager trans. Auburn, AL: Mises Institute.
———. (1985). *Liberalism*. Irvington-on-Hudson, NY: Foundation for Economic Education and San Francisco: Cobden Press.
———. (1994). *The Anticapitalistic Mentality*. Grove City, PA: Libertarian Press.
———. (1996). *Human Action*. 4th ed. San Francisco: Fox & Wilkes.
———. (2012). *Economic Calculation in the Socialist Commonwealth*. S. Adler trans. 1990. Auburn, AL: Mises Institute.
Moore, G.E. (2004). *Principia Ethica*. New York: Dover Publications.
Morris, Thomas. (1999). *Philosophy for Dummies*. New York: Hungry Minds.
Murphy, Robert. (2003). *Unanticipated Intertemporal Change in Theories of Interest*. Diss. New York University.
O'Hara, Frank. (1919). *Introduction to Economics*. New York: Macmillan.
Pellengahr, Ingo. (1996). *The Austrian Subjectivist Theory of Interest*. New York: Peter Lang.
Polanyi, Michael. (1948). *Full Employment and Free Trade*. UK: Cambridge.
Robinson, Joan. (1937). *Essays in the Theory of Employment*. London: Macmillian.
Rothbard, Murray. (1985). "Professor Hebert on Entrepreneurship." *The Journal of Libertarian Studies*, vol. 7, no. 2, pp. 281-6.
———. (1990). "The Science of Liberty: An Interview with Murray N. Rothbard." *The Austrian Economics Newsletter*. Summer.
———. (1998). *The Ethics of Liberty*. New York: New York University Press.
———. (2000a). *America's Great Depression*. 5th ed. Auburn, AL: Mises Institute.
———. (2000b). *Egalitarianism as a Revolt Against Nature*. 2nd ed. Auburn, AL: Mises Institute.
———. (2004). *Man, Economy, and State with Power and Market*. Scholar's ed. Auburn, AL: Mises Institute.
———. (2008). *The Mystery of Banking*. 2nd ed. Auburn, AL: Mises Institute.
———. (2010). *What Has Government Done to Our Money?* Auburn, AL: Mises Institute.
Salerno, Joseph. (1992). "The Development of Keynes's Economics: From Marshall to Millennialism." *Review of Austrian Economics*, vol. 6, no. 1, pp. 3-64.
———. (2003). "An Austrian Taxonomy of Deflation." *The Quarterly Journal of Austrian*

Economics, vol. 6, no. 4, pp. 81-109.
———. (2012). "A Reformulation of Austrian Business Cycle Theory in Light of the Financial Crisis." *The Quarterly Journal of Austrian Economics*, vol. 15, no. 1, pp. 3-44.
Samuelson, Paul. (1983). "The House That Keynes Built." *New York Times*, May 29.
Samuelson, Paul & William Nordhaus. (2005). *Macroeconomics*. 18th ed. New York: McGraw-Hill/Irwin.
Schumpeter, Joseph. (2008). *Capitalism, Socialism, and Democracy*. 3rd ed. New York: Harper.
———. (2010). *The Theory of Economic Development*. New Brunswick, NJ: Transaction Publishers.
Selgin, George & Lawrence H. White. (1996). "In Defense of Fiduciary Media." Review of Austrian Economics, vol. 9, no. 2, 83-107.
Shackle, G.L.S. (1955). *Uncertainty in Economics*. London: Cambridge.
———. (1982). "Sir John Hicks' 'IS-LM: an explanation': a comment." *Journal of Post Keynesian Economics*, vol 4, no. 3, pp. 435-8.
Sieroń, Arkadiusz. (2019). *Money, Inflation and Business Cycles*. New York: Routledge.
Skidelsky, Robert. (2010). *Keynes: The Return of the Master*. New York: PublicAffairs.
Skott, Peter. (1989). *Conflict and Effective Demand in Economic Growth*. New York: Cambridge University Press.
Skousen, Mark ed. (1992). *Dissent on Keynes*. New York: Praeger Publishers.
de Soto, Jesús Huerta. (2006). *Money, Bank Credit, and Economic Cycles*. Melinda Stroup trans. Auburn, AL: Mises Institute.
Taleb, Nassim. (2010). *The Black Swan*. New York: Random House.
Tily, Geoff. (2010). *Keynes Betrayed*. New York: Palgrave Macmillan.
Timberlake, Richard. (1987). "A Critique of Monetarist and Austrian Doctrines on the Utility and Value of Money." *Review of Austrian Economics*, vol. 1, pp. 81-96.
Ventelou, Bruno. (2015). *Millennial Keynes*. Gregory Nowell trans. New York: Routledge.
Weaver, Richard. (1995). *Visions of Order*. Bryn Mawr, PA: Intercollegiate Studies Institute.
Woods, Thomas. (2009). *Meltdown*. Washington, DC: Regnery Publishing.
Yeager, Leland. (1997). *The Fluttering Veil*. Indianapolis, IN: Liberty Fund.